HARRIS COUNTY ARCHIVES

Document Separation Sheet

The following material has been removed from:

Box: 1483
Folder: 37
Location:

Description of materials:

Accession No: 2008.027 **Date:** 1966-1973

Reason for removal:

Closed - Medical Records and Personal Photographs ML 73-3413 Billy Gene Baulch, Jr.

New Location:

Box: 1484
Folder: 15
Location:

Notes:

Make 2 copies: place one in new location with transferred materials, one in original location.

Date: 7/21/2010

Signed: [signature]

ARCHIVES FORM 299-015 NOVEMBER 2003)

1973 MASS MURDER INVENTORY CASES TO DATE AS OF 071501

DR. DELATTRE VIEWED CASE: _____ *CASE FINDINGS...SEE ATTACHED REPORT DATED* _____

ITEM #	CASE #	DECEDENT'S NAME	TYPE OF REMAINS	LOCATION OF REMAINS	DATE FOUND	DATE ID'D & BY WHAT METHOD
(26)	73-3413	Billy Wm-	Skeletal	See Autopsy Report	8-13-73	See 10-8-73 Supplement
Body #5		Gene			High Island	dentals
Grave #4		Bausch, JR			gravesite	

FOUND@: Chambers Co.

NOK NOTIFIED: (Y) / N

DATE /TIME NOTIFIED: 10-8-73 Dad NOTIFIED BY WHOM: Dr Jachimczyk

AUTOPSY DONE BY/DATE: Dr. Jachimczyk 8-15-73

INVESTIGATOR REPORT: (Y) / N AUTOPSY REPORT: (Y) / N POLICE REPORT: Y / (N) SCENE PHOTOS: Y / (N)

DEATH CERTIFICATE: Y / N DATE D/C SIGNED: Not in file

Not in file

FULL BODY XRAYS: Y / N — Not in file

DENTAL CHART/XRAYS: Y / N — Body xrays in file + See Dr Simsons autopsy dfam report

DNA: Y / N — Not in file

RELEASE SIGNED: Y / N DATE: Not in file BY:

TRANSFERRED TO HCME BY: Sterling F.H., Dayton, TX

FUNERAL HOME: Heights BURIED ? CREMATED ?

MANNER OF DEATH: Asphyxia due to strangulation DOD: 5-21-72

SOURCE: HCME Report & Investigator File

OTHER INFORMATION: J.P. order in file dated 8-13-73

See 10-11-73 Supplement Re: Skeletal parts No property

Comp. cases 73-3365, 3366, 3408, 3409, 3412

SEX: M

RACE: W

EST. AGE:

HEIGHT: 72

WEIGHT:

EYES:

HAIR: lt. brown 7 inches

SCARS: Decomposed body

TATTOOS:

OTHER:

X-RAY:

CLOTHING: Nude

PERSONAL EFFECTS: None

BODY CAN BE VIEWED: YES ____ NO ____

DECEDENT'S NAME:

DECEDENT'S ADDRESS:

NEXT OF KIN:

ADDRESS:

IDENTIFIED BY: DATE:

ADDRESS:

HCME OFFICER PRESENT:

(13) 9-27-73 NPD Chemist + Toxicologist, James A. Zotter recd head + pubic hair from dec. Also recd. samples of both types of cord that was recovered.

Autopsy

XXXXXX

INVESTIGATOR'S REPORT

Investigator: L. C. Kelly

Case No. 73 - 3333

Decedent: Michael Anthony Baulch Race W Sex M Age 15

Address: 439 West 16th Street, Houston, Texas

Death: FOUND August 8, 1973 Approx. Time 8:00 XXXXX P.M.

Place of Death: 4500 Silverbell Street, Stall #11, Houston, Texas

Place of Inquest: 4500 Silverbell Street, Stall #11, Houston, Texas

Date and Time of Inquest: August 8, 1973 8:45 XXXXX P.M.

Location, Position, and Surroundings of Body:

The decedent was lying in grave #1, wrapped in plastic, lying on the left side under Unknown #1.

Clothing: There was no clothing.

Information:

This is a related case to Medicolegal 73-3329.

L. C. Kelly

L. C. Kelly

(See Companion Cases 73-3332, 73-3334, 73-3335, 73-3336, 73-3337, 73-3338, 73-3339, 73-3347, 73-3348, 73-3349, 73-3350, 73-3353, 73-3354, 73-3355, 73-3356 and 73-3357)

Property: There was no property.

Transferred to Morgue by: Bob Lee Funeral Home, Houston, Texas

Funeral Home Conducting Service: Heights Funeral Home, Houston, Texas

Stall #11

LOCATION: 4500 Silverbell GRAVE # 1

UNKNOWN # 2 M.E. CASE # 73-3333

IDENTIFIED

NAME: Michael Anthony Bauch

STILL UNKNOWN

I N V E N T O R Y S H E E T

HAIR SAMPLES:____

BODY X-RAYS: HCME 6 OTHER____

DENTAL X-RAYS: HCME____ OTHER____

HCME PHOTOS: BODY___ PERSONAL EFFECTS____

CLOTHING____ DENTAL_____

PHOTO FROM FAMILY:____

MISSING PERSONS REPORT_____

DEATH CERTIFICATE ✓

BRIEF PHYSICAL DESCRIPTION ✓

SYNOPSIS OF MEDICAL TESTIMONY:_____

AUTOPSY REPORT: ROUGH (FINAL)

SUPPLEMENTAL: ROUGH (FINAL)

INVESTIGATORS REPORT: ROUGH FINAL

SUPPLEMENTAL: ROUGH FINAL

TOXICOLOGY REPORT

DENTAL EXAMINATION: ROUGH (FINAL FORM)

POINTS OF COMPARISON: ROUGH FINAL FORM

HCME DENTAL CHART_____

OTHER DENTAL CHART_____

EVIDENCE SHEET:_____

CORRESPONDENCE:_____

COMPARISONS:_____

OTHER:_____

STATE OF OHIO
HP-24C
Rev. 8/70

DEPARTMENT OF HIGHWAY SAFETY

STATE HIGHWAY PATROL

DENTAL CHART

Fill out all information in PENCIL

_____ Assigned identification number

_____ Division Case Number

73-3333 #2 Autopsy number

_____ Picture Pouch Number

_____ Armed Forces Serial Number

8/10/73 Date of Exam.

_____ Social Security Number

_____ Place of Exam.

IDENTIFICATION STATUS (CIRCLE ONE)
UNIDENTIFIED AT PRESENT TIME, PRESUMPTIVE BY EXCLUSION, HIGHLY PROBABLE, (POSITIVE)

Michael Baulch

Name of Person Identified | Age | Race | Sex

The above block is to be completed after all I.D. Procedures are exhausted.

CONFIRMED IDENTIFICATION OF BODY BY _____
Name of Examiner

Confirmed identification by means of (circle) X-ray comparison, Clinical conformation by previous dental records, Other _____

X-rays taken (circle one) None, Complete Mouth, Bite Wings, Other _____

Photographs taken (circle one) None, Color, Black & White, Other _____

_____
Name, Address, and Telephone Number of Photographer

Location of the Body _____

Position of the Body _____

BEFORE PROCEEDING—READ PAGE 2 CAREFULLY AND FOLLOW ALL INSTRUCTIONS—HAVE A QUALIFIED ASSISTANT TO DO ALL RECORDING
RECORD ALL INFORMATION IN PENCIL

_____
Name, Address, and Telephone Number of the Examiner

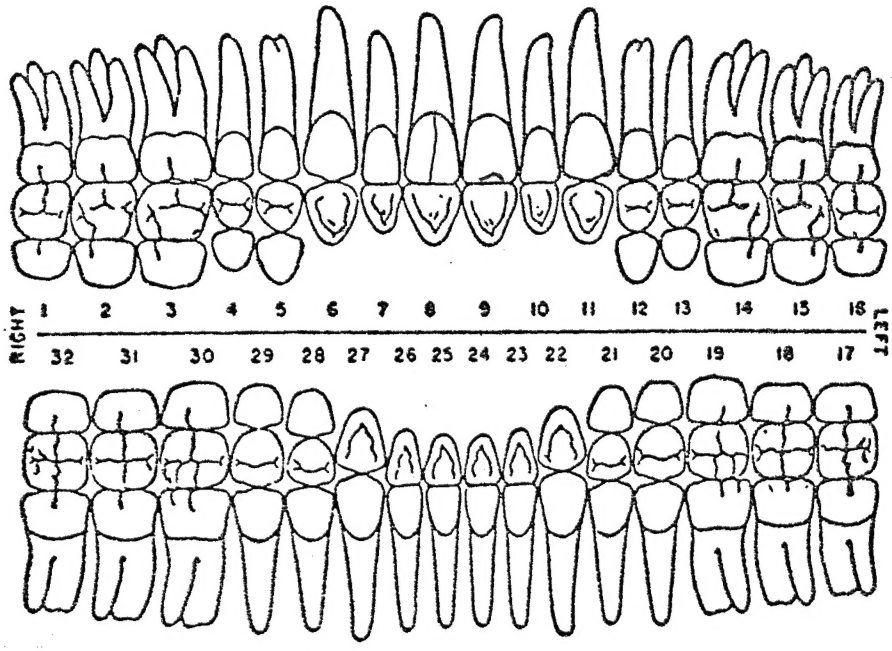
_____
Name, Address, and Telephone Number of the Assistant

_____ Signature of the examiner

_____ Signature of the Assistant

MARK ALL EXISTING RESTORATIONS AND MISSING TEETH ON THIS CHART

Estimated Age_____
Sex_____
Race_____



Circle descriptive term

Prosthetic Appliances Present —— Maxilla

Full Denture

Partial Denture

Fixed Bridge

Prosthetic Appliances Present —— Mandible

Full Denture

Partial Denture

Fixed Bridge

Describe completely all Prosthetic Appliances or Fixed Bridges #9 CHIPPED INCISAL #8 VERTICAL CRACK

Stains on teeth

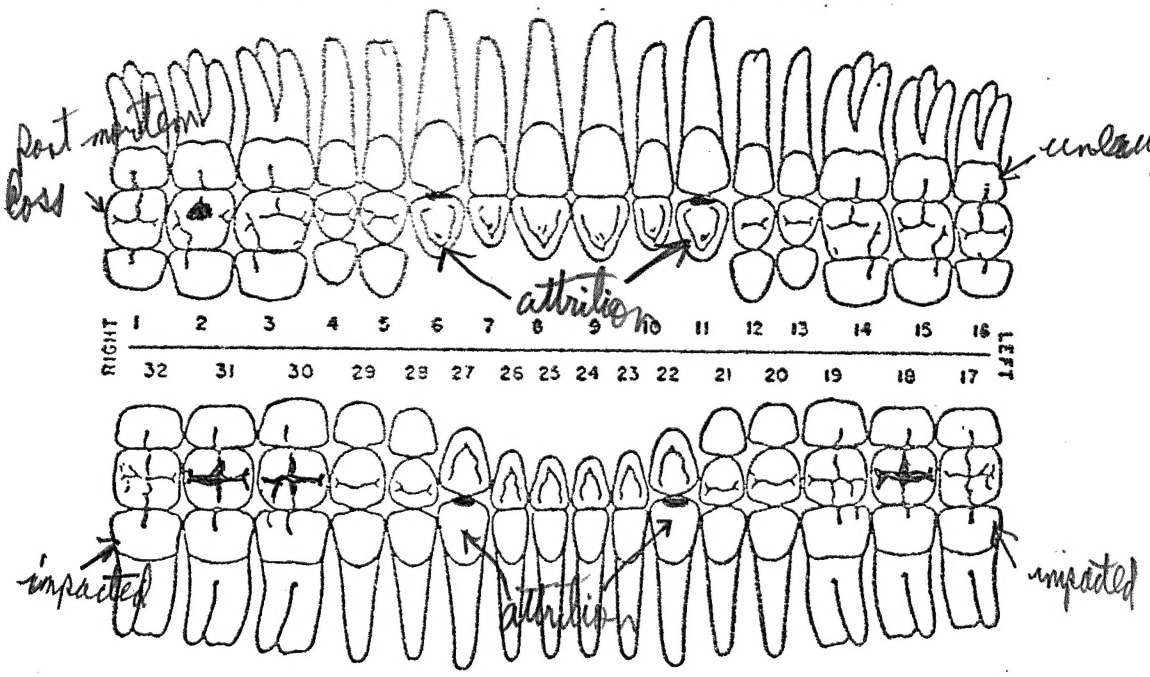
Slight

Moderate

Severe

MARK ALL CARIES TEETH ON THIS CHART

Outline all caries and 'X' out all missing teeth



Circle descriptive term

Jaw Relationship

Normal

Undershot

Overbite

Periodontal condition

Excellent

Average

Poor

Gross Neglect

Calculus

Slight

Moderate

Severe

OFFENSE REPORT

HOUSTON POLICE DEPARTMENT

PAGE NO. ONE SER. No. D-68920

LOCATION 4500 BELVER BELL

OFFENSE MURDER CHANGED TO

MF 3333

COMPLAINANT MICHAEL ANTHONY BAULCH ADDRESS 439 W. 16th PHONE 862-8344

SEX-RACE-AGE WM 15

REPORTED BY ELMER WAYNE HENLEY WM-17 ADDRESS 325 W.27th PHONE

TYPE PREMISES RENTAL STORAGE GARAGE

TIME OCCURRED

TIME RECEIVED @ 2:30PM WED, AUG. 8, 1973 BY DET. D.R. JAMES HOW PHONE

HOW-MEANS	OBJECT	TRD. MK.	DESCR.	CLEARED	DATE

DISTRIBUTION	1 CASH	2 JEWELRY	3 BICYCLES	4 CLOTHING	5 MOTOR VEHICLE	6 MISCELLANEOUS	7 FURS	TOTAL
LOSS								
RECOVERY-DTL.								

(DETAILS OF OFFENSE-SUSPECTS-PERSONS ARRESTED-PROPERTY)

NOTE: THIS WILL BE A COMPANION CASE TO D-68904, WHICH WILL CONTAIN ALL DETAILS OF THIS OFFENSE. OTHER COMPANION CASES WILL BE D-68905 THROUGH D-68911 and CASES D-68915 THROUGH D-68923.

INTRODUCTION:

This complainant was found in a grave in a rental storage garage at the above location on 8-9-73. THE identity of this complainant is unknown at this time. For Details known at this time see case D-68904.

IDENTIFICATION OF COMPL. 10-9-73

DR. Jachimeyzk called this date and stated that he had made ID of this Compl. as BODY #2 from the boat shed. The cause of death was by two gunshot wounds at close range to the head.

OFFICERS D.R. JAMES D-547 L.L. EARLS D-576 N. NEUMAN D-461 K. D. Porter D563

(DO NOT TYPE BELOW THE SOLID LINE OR LIST PROPERTY ACROSS THE DOTTED LINE.)

EDITED CHANGED INDEXED BULLETIN PUNCHED

JOSEPH A. JACHIMCZYK, M.D., J.D.
FORENSIC PATHOLOGIST
ATTORNEY AT LAW
CHIEF MEDICAL EXAMINER

228-8311
EXT. 671 (DAY)
EXT. 212 (NIGHT)

OFFICE OF THE MEDICAL EXAMINER
OF HARRIS COUNTY
HARRIS COUNTY COURT HOUSE
HOUSTON, TEXAS 77002

September 27, 1973

This date, September 27, 1973, James A. Zotter, Chemist and Toxicologist, Houston Police Department, received head hair and pubic hair from Case 73 - 3329, Dean Arnold Corll, hair samples (head) from Cases 73 - 3333, 73 - 3334 and 73 - 3335, and samples of both types of cord which was recovered.

James A. Zotter

Joseph A. Jachimczyk, M.D., J.D.
Chief Medical Examiner

1973 MASS MURDER INVENTORY CASES TO DATE AS OF 071501

DR. DELATTRE VIEWED CASE: _____ *CASE FINDINGS…SEE ATTACHED REPORT DATED* _____

ITEM #	CASE #	DECEDENT'S NAME	TYPE OF REMAINS	LOCATION OF REMAINS	DATE FOUND	DATE ID'D & BY WHAT METHOD
(2)	73-3333	Michael Anthony Bauich W/M/age?		See Autopsy Report	8-8-73 Boatshed Decomp Nude	10-9-73 See Supplement ID Made by parents Viewing dentals, clothing, photo positive comparison

FOUND@: 4500 Silverbell St., Stall #11, Crave #1

NOK NOTIFIED: (Y) / N

DATE /TIME NOTIFIED: 10-9-73 Time (N/A) NOTIFIED BY WHOM: See 10/9/73 Supplement

AUTOPSY DONE BY/DATE: Dr. Jachimczyk 8-9-73

INVESTIGATOR REPORT: (Y) / N AUTOPSY REPORT: (Y) / N POLICE REPORT: Y / (N) SCENE PHOTOS: Y / (N)

DEATH CERTIFICATE: (Y) / N DATE D/C SIGNED: 10-17-73- Billy Bauch, Sr Dad

FULL BODY XRAYS: (Y) / N @ autopsy Skeletal remains

DENTAL CHART/XRAYS: Y / (N) See Autopsy Exam Done By Dr. P.G. Stimson

DNA: (Y) / N 9-27-73 letter Head/Pubic Hair

RELEASE SIGNED: Y / (N) DATE: Not in file BY: _____

TRANSFERRED TO HCME BY: Bob Lee FH

FUNERAL HOME: Heights BURIED Woodlawn Garden of Memories CREMATED _____

MANNER OF DEATH: GSW (3) of head DOD: 8-21-73/autopsy report

SOURCE: HCME Records Dept + Investigator File

OTHER INFORMATION: No clothing, otherman belt buckle

Compcases: 73-3332, 3334, 3335, 3336, 3337, 3338, 3339, 3347, 3348, 3349, 3350, 3353, 3354, 3355, 3356, 3357

AFFIDAVIT OF HEIRSHIP

I, DANNY WAYNE BAULCH, hereby attest that the following is a true and correct representation of the line of heirship for my parents, BILLY GENE BAULCH, SR. AND MAGGIE JANE BAULCH, deceased.

During their marriage, BILLY AND MAGGIE had seven (7) children. Neither of them had any other children by any other marriage or union. Nor did they adopt any children, or take any children into their home with the understanding of adoption. Their children are listed below:

1. Marvin Lee Baulch, deceased
2. Billy Gene Baulch, Jr., deceased
3. Michael Anthony Baulch, deceased
4. Robert Clifton Baulch, deceased
5. Patricia Darlene Baulch Horacek
6. Debra Sue Baulch Hernandez
7. Danny Wayne Baulch

Executed this 28th day of Sept. 2010.

Danny Wayne Baulch

* * * *

State of Texas
County of Harris

Before me, the undersigned authority, on this day personally appeared DANNY WAYNE BAULCH, known to me to be the person whose name is subscribed hereto, and who, upon his oath, did attest to the foregoing statements. Subscribed and sworn to before me on this 28th day of Sept., 2010.

Sylvia O. Molina
Notary Public, State of Texas
My Commission Expires: 02-15-2012

Sylvia O. Molina
Notary Public
State of Texas
My Commission Expires
February 15, 2012
NOTARY WITHOUT BOND

EXHIBIT
11

Woodlawn

Funeral Home, Inc.
Garden of Memories Cemetery, Inc.
Pre-Planned Funeral Services, Inc.

November 4, 2010

Dr. Sharon N. Derrick (HCIFS)
1885 Old Spanish Trail Road
Houston, TX 77054-2001

Dear Ms. Derrick:

Billy Gene Baulch, Jr. and Michael Anthony Baulch were interred into Space 8, Lot 171, Block 2 in Woodlawn Garden of Memories Cemetery on October 12, 1973.

The owner of the property described above is, B.G. Baulch.

Please call upon us if we may be of further assistance.

Sincerely,
WOODLAWN GARDEN OF MEMORIES, INC.

Jessica Oquendo
Office Manager

JO/ef
Enclosures

EXHIBIT
13

Office (713) 682-0517 Fax (713) 681-6581 8010 Katy Freeway Houston, TX 77024-1908
Funeral Home (713) 682-3863 Fax (713) 682-3899 1101 Antoine Drive Houston, TX 77055-6919

DOD: 8/8/1973 WM - (18Y 4M)

BAULCH, JR., BILLY GENE ML73-3413

RECORD OF IDENTIFICATION PROCESSING
SKELETAL CHART

Unk #26

ML 73-3413

LAST NAME - FIRST NAME - MIDDLE INITIAL (or unknown number)

GRADE	SERVICE NUMBER

NAME OF CEMETERY, EVACUATION NUMBER, OR SEARCH AND RECOVERY NUMBER

PLOT	ROW	GRAVE

ESTIMATED AGE (Years)	ESTIMATED HEIGHT
21-23	63½ - 66 inches

SKELETAL MEASUREMENTS (Centimeters)

SKELETAL MEMBER	METHOD	RIGHT	LEFT
SKULL			
HUMERUS			
ULNA			
RADIUS			
FEMUR			
TIBIA			
FIBULA			

REMARKS OR STATEMENT OF ANTHROPOLOGIST (Continue on reverse if more space is required)

Dorsal arch of one lumbar vertebra missing. - symmetrical - possible spina bifida?

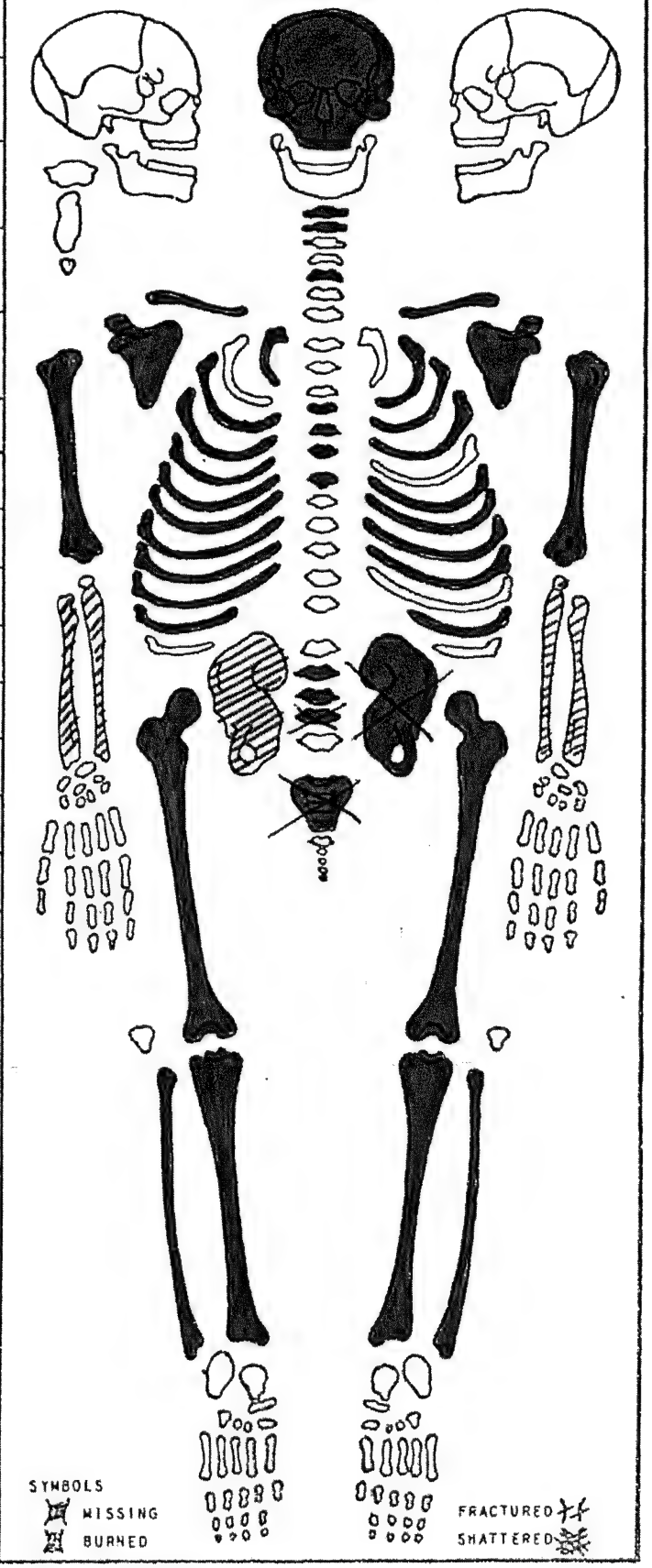
10-11-73 Note (1) age based on L. pelvis does not fit this decedent, Age of right pelvis is consistent with age 17. Correct pelvis placed 2 remains this date. (2) Radius & ulna (R & L) added this date. Bone structure, size & elbow articulation fit this body. See dictated note this date.

THE PARTS PRESENT AS INDICATED ON THIS SKELETAL CHART REPRESENTS ONE AND THE SAME INDIVIDUAL

PHYSICAL ANTHROPOLOGIST (Name)

SIGNATURE

BLACK OUT PORTIONS NOT RECOVERED



DD FORM 1 FEB 66 892 REPLACES QMC FORM 1044, 18 MAR 47, WHICH IS OBSOLETE.

GPO: 1969 O-343-783/367

HARRIS COUNTY INSTITUTE OF FORENSIC SCIENCES
1885 OLD SPANISH TRAIL
HOUSTON, TEXAS 77054-2001

Sharon M. Derrick, Ph.D.
Forensic Anthropologist

ML73-3413

REPORT OF ANTHROPOLOGY CONSULTATION

CASE NUMBER: ML73-3413 (formerly IO11-00556)
NAME: Billy Gene Baulch, Jr.
PATHOLOGIST: Joseph A. Jachimczyk, MD, G. Sheldon Green, MD and Dwayne A. Wolf, MD, PhD
DATE (analyzed): March 11-14, 2011

On February 10, 2011, Dr. Wolf, Deputy Chief Medical Examiner, requested a skeletal profile and trauma analysis review of the skeletal remains of ML73-3413 (IO11-00556). The remains were exhumed from Woodlawn Cemetery, 1101 Antoine Drive, Houston, Texas under Order Number 2010-83010 from Harris County District Court 151. The exhumation was performed on February 8, 2011 to examine ML73-3333 and ML73-3413 for collection of anthropological and DNA data. See the original autopsy reports for ML73-3333 and ML73-3413 included in the current case files and the Case Background section below for detailed information on these cases. Two discrete body bags containing skeletal remains were recovered from within a single casket. The remains were immediately transferred to the HCIFS Morgue, received through the check-in process, and placed in the Anthropology Laboratory. Although the remains were believed to be those of ML73-3333 and ML73-3413, the cases were assigned inquest numbers (IO11-00555 and IO11-00556, respectively) at check-in.

As a result of the shallow water table geology of the Houston area, the two body bags were submerged in muddy water within the casket. The water had leaked through the zippers, resulting in waterlogged and softened skeletal elements. Further, mineral deposits had precipitated from the water to coat the majority of the bone surfaces. The elements of each set of remains were washed individually in cool water, reconstructed, ordered, and placed in anatomical position on an examination table to dry.

IO11-00555 and IO11-00556 were assessed for the minimum number of individuals present and for evidence of possible commingling of the decedents placed in the casket in 1973. The remains were also compared with photographs and inventory documentation from the ML73-3333 and ML73-3413 case files. IO11-00555 represents the nearly complete skeletal remains of one individual and is consistent with the archived photo and record documentation of ML73-3333. IO11-00556 is comprised of a minimum of two commingled individuals (see Inventory below), but is consistent with the archived photo and record documentation of ML73-3413. Therefore, IO11-00555 is reassigned case number ML73-3333 and IO11-00556 is reassigned case number ML73-3413.

ML73-3413 was examined grossly and with a stereomicroscope when appropriate, measured and photographed. Elements representing a second individual were removed and submitted to the University of North Texas Center for Human Identification (UNT) for DNA analysis (see Inventory below). Following the examination, ML73-3413 was placed in a box labeled with the case number and returned to the HCIFS Morgue refrigeration unit.

Case Background

ML73-3333 and ML73-3413 are two of 27 companion cases recovered from three locations during a serial murder investigation in August 1973. The partially fleshed, articulated remains of ML73-3333 were recovered on August 8, 1973 from the dirt floor of a storage facility in southwest Houston. The disarticulated skeletal remains of ML73-3413 were recovered from a burial site on a beach in Chambers County on August 13, 1973.

ML73-3333 and ML73-3413 were identified through circumstantial evidence on October 9, 1973 as brothers Michael Anthony Baulch and Billy Gene Baulch, Jr. (see Identification section below). The remains were released to the funeral home on October 10. The family chose to place the decedents within the same casket for burial in the Woodlawn Cemetery.

ML73-3333 was misidentified as Michael Baulch in 1973. The misidentification was discovered in 2010 during the ongoing Forensic Anthropology Division review of

unidentified decedent cases. ML73-3378, a companion case recovered from a Lake Sam Rayburn beach on August 9, 1973 was subsequently identified as Michael Baulch by DNA comparison. See Identification below. The identity of ML73-3333 is unknown at this time (see Anthropology Report ML73-3333).

Inventory

The remains of ML73-3413 represent a minimum of two individuals. The first individual, identified as Billy Baulch, is represented by approximately 60% of the skeleton. The following elements are absent.

Mandible
Right ribs 1-2 and 11-12
Left ribs 8 and 10-12
Manubrium, corpus sterni, and xiphoid process
Cervical vertebra 3
Three mid-range cervical vertebrae
Nine mid-range through lower range thoracic vertebrae
Lumbar vertebrae 2-5
Sacrum
Right innominate
Right patella
Left patella
Right carpals (7), right hamate is present
Right metacarpals 1-5
All phalanges of the right hand
Left ulnar epiphysis
Left carpals (8)
Left metacarpals 1-5
All phalanges of the left hand
Right tarsals (7)
Right metatarsals 1-5
All phalanges of the right foot
Left tarsals (7)
Left metatarsals 1-4

Left metatarsal 5, retained in 1973 and submitted for DNA analysis in 2006)
All phalanges of the left foot

The following elements are inconsistent in size, general morphology, and/or age with the majority of the remains. These elements, representing a minimum of one individual, were examined and photographed prior to removal for DNA analysis. A case number(s) will be assigned to the remains after receipt of DNA results.

- Right innominate: the right innominate is more robust than the left, and the size of the acetabulum is not a good fit for the right femoral head. The left innominate and left femur articulate well. DNA analysis of the left innominate indicates that the left innominate likely belongs to Billy Baulch (see Identification section below).
- One mid-range thoracic vertebra, one upper range lumbar vertebra, and one mid-range lumbar vertebra. The rims of the centra are more developed than those of the other vertebrae, and may represent an older individual. The lumbar vertebrae centra also contain Schmorl's nodes, inconsistent with the healthy centrum faces of the other vertebrae. DNA analysis indicates the more youthful vertebrae belong to Billy Baulch (see Identification section below).
- One right second or third rib. The rib is noticeably more robust than the upper range ribs of the left side.

Skeletal Profile

The following profile was obtained from the remains determined by comparison of morphology, growth, and development to belong to the same individual and to represent the majority of ML73-3413. The results are consistent with the missing person description of Billy Gene Baulch, Jr. (17 years old at disappearance on 5/21/1972, DOB: 04/21/1955, White male, estimated 5'9" tall) obtained from the original autopsy report supplement, dated October 8-9, 1973, in which ML73-3413 was identified as Billy Gene Baulch, Jr.

- Age: 16-19 years
- Ancestry: White, with possible Native American admixture
- Sex: Male
- Stature: 62.0"-68.6" (5'3" - 5'9")

Age

The decedent is an adolescent of an estimated 16-19 years based on epiphyseal fusion, age-related morphology of the sternal end of the fourth rib and the pubic symphysis, dental development, and general skeletal size.

The remains are large enough in general size to represent an adult individual. However, the pattern of epiphyseal fusion is consistent with an adolescent that has not yet attained full adult skeletal growth and development. The following epiphyses are in a stage of partial union. The age range estimates for fusion follow Scheuer and Black.

- Basilar suture (range 13-18 years)
- Posterior atlas, likely an anomaly, fuses at approximately 4-5 years
- Rib heads (range 17-25 years)
- Thoracic vertebral rims (range puberty to early 20s)
- Lumbar vertebral rim (range puberty to early 20s)
- Ischial tuberosity (<20 years)
- Iliac crest (17-20 years)
- Head of humerus (16-20 years)
- Medial epicondyle of humerus (14-16 years)
- Distal radius (16-20 years)
- Distal ulna (17-20 years)
- Head of femur (15-19 years)
- Distal femur (16-20 years)
- Proximal tibia (15-19 years)

The age-related morphology of the left fourth rib is consistent with Phases 0-1a (male) of the Iscan model, corresponding to an age range of <17-19 years. In cross-section the rib end is smooth and minimally convex, with no development of the rim observed. Age-related morphology of the left pubic symphysis face corresponds to male Phase I-1 of the Suchey-Brooks method, with a range of 15-23 and a mean of 18.5 years of age. The symphyseal face is somewhat eroded as a result of taphonomic processes but there is clear absence of upper and lower delimitation accompanied by the presence of marked ridges and furrows.

The dentition is consistent with that of an adolescent. The maxillary third molars, teeth 1 and 16, are in an early stage of eruption. The roots have developed to approximately ¾ of the full length and are open at the apices. Although development and eruption of the third molars is variable, this stage has been described by Smith as consistent with a mean age of 16.4 years. The dentition is described more fully under the Dentition section below.

Ancestry

ML73-3413 is estimated as White with possible Native American admixture based on metric and morphological analyses. Cranial and postcranial measurements for ML73-3413 were entered into FORDISC 3.1, a multidiscriminant function software program. FORDISC 3.1 compared the measurements with those compiled in the Forensic Database and provided the following classification results:

- White male, based on 39 postcranial measurements compared with males and females in the Forensic Database (posterior probability=0.998, typicality probability=0.657, and a low typicality Chi=0.040).
- White male, based on stepwise comparison of 5 postcranial measurements also compared with both males and females (posterior probability=0.478, typicality probability=0.450, typicality Chi=0.414). The decedent is an adolescent. Comparison with only male measurements results in an inconclusive classification.
- White male, based on 17 cranial measurements compared with all individuals in the Forensic Database (posterior probability = 0.774, typicality probability =0.345, typicality Chi=0.265).
- White male, based on stepwise comparison of 11 cranial measurements with males only (posterior probability=0.645, typicality probability=0.677, typicality Chi=0.645).

The morphological method of ancestry estimation for ML73-3413 follows the Gill and Rhine model. Characteristics of the cranium associated with White populations observed in the decedent include: small retreating zygomatics, a sharp protruding nasal sill, a narrow nasal aperture, high arched nasal bones, and little alveolar prognathism. Characteristics of the cranium associated with Native American populations observed include: a low sloping skull shape, rounded and high skull

height, broad and flat facial shape, square eye orbits, angled zygomaxillary sutures, a markedly elliptic palate shape, straight palatal suture, and a lack of crowding in the dentition. The femur curvature is uninformative for ancestry because it differs between the left femur (arched) and the right femur (little arching).

In addition to the Gill and Rhine skeletal morphology model, non-metric traits of the maxillary dentition are supportive of White ancestry/Native American admixture. The Carabelli's cusp trait is frequently expressed in males of European descent while the shovel shaped incisor trait is infrequently expressed. Conversely, the shovel shaped incisor trait is frequently expressed in populations of Asian descent, such as Native Americans. The Carabelli's cusp trait is infrequently expressed in these populations. Research on the genetic basis for expression of these traits is published in the current dental and anthropological literature. Both traits are observed in the maxillary dentition of ML73-3413, suggesting a possible combination of White and Asian/Native American ancestry. See the Dentition section below for further description.

Sex

The decedent is estimated as male based on results from the FORDISC 3.1 cranial and postcranial analyses described under Ancestry, the diameter of the humeral and femoral heads, the morphology of the cranium using the Buikstra and Ubelaker model, and the structure of the pelvis following the Phenice model.

The male characteristic of marked extension of the zygomatic arch past the external auditory meatus is observed in the cranium. The majority of the cranial characteristics are either indeterminate or female in expression, likely due to the young developmental age of the decedent. Male characteristics observed in the postcranial skeleton include features of the pelvis (a narrow sciatic notch, absence of a ventral arc, subpubic convexity, absence of ischiopubic concavity, short pubic length, and a flat sacral attachment), humeral head diameters greater than 47.2 mm and femoral head diameters of 47 mm and 48 mm.

Stature

Living stature is estimated using FORDISC 3.1 comparison of postcranial measurements from the decedent with those of White males compiled in the Forensic

Database. FORDISC 3.1 calculates an estimated stature range of 62.0"-68.6" (5'2"-5'9").

Trauma

Antemortem:

An investigator supplement to the ML73-3413 autopsy report notes that "An X-ray of Billy Baulch's left elbow...revealing a fracture which occurred in 1966" was turned over to H.C. Gregory of the Harris County Morgue. This radiograph is not available for review. No fracture scars are observed on the distal left humerus or the proximal left radius and ulna. Instead, a very subtle well-healed fracture scar is observed on the distal left radius. Due to the fact that the elbow injury occurred approximately five years prior to death and the decedent was 11 years old at the time, it is possible that the fracture line is no longer visible.

Perimortem:

No perimortem injury is described in the ML73-3413 autopsy report. Due to taphonomic processes of burial and periodic submersion in water for 38 years, perimortem injury to the skeleton cannot be reliably distinguished from postmortem damage.

Postmortem:

The maxillary dental arch was removed with an autopsy saw for identification purposes at the original examination. Crumbling of the fragile nasal bones, ethmoid, and vomer is observed. A small round defect in the superior right scapular blade is consistent with puncture of the delicate blade in an anatomically anterior to posterior direction. The elements are coated with residual quick-lime (noted at autopsy) as well as the precipitated mineral sheets described above. The cortical surfaces of the morphological features are somewhat eroded. A complete transverse fracture of left rib 9 occurred during cleaning of the elements for examination.

Pathology and Individualizing Characteristics

No pathological conditions are observed. The following individualizing characteristics are present: retained metopic suture of the frontal bone and incomplete fusion of the first cervical vertebra posterior rim.

Dentition

The mandible was not recovered in 1973 and is absent at this examination. All maxillary teeth were present in the dental arcade at recovery in 1973. Teeth 8-12 are absent postmortem at this examination but are documented in the original autopsy report and photographs. The dentition is relatively healthy and no reconstructions are observed. A Carabelli's cusp (accessory cusp that may develop on the mesiolingual cusp of the maxillary first molar) is observed on teeth 3 and 14. Tooth 7 is shovel-shaped (presence of lingual marginal ridges resulting in a concave lingual surface).

Dr. Paul G. Stimson notes caries on teeth 2-3 and 14-15 during his examination of the maxillary dentition in 1973. These caries are observed as pits within the grooves around the occlusal cusps. Dr. Stimson also notes chipping and excessive wear on tooth 9 but tooth 9 is now absent. See Dental Examination on page 4 of the ML73-3413 autopsy report.

Postmortem Interval

At the time of original skeletal recovery from a shallow sandy beach grave in August 1973, Billy Baulch had been missing since May 21, 1972 (14 months). The remains were coated with lime and wrapped in heavy plastic. The condition of the remains at recovery was described in the ML73-3413 autopsy report as, "skeletal remains...with the flesh nearly completely deteriorated away." Photographs depict disarticulated elements, fully exposed bone, and minimal amounts of adherent tissue. Given the circumstances of deposition, the decomposition stage is consistent with a postmortem interval of one to two years.

Identification

ML73-3413 was identified in 1973 as Billy Gene Baulch, Jr. based on the following evidence.

- Recognition of the head hair by parents, Mr. and Mrs. Billy Gene Baulch, Sr.
- Recognition of the anterior teeth by Mr. and Mrs. Baulch, particularly the "pointed canines" and a chip in the occlusal surface of tooth 9.
- Review of an antemortem photo of Billy Baulch that shows the anterior teeth in comparison with the maxillary dental arcade of ML73-3413 and also with Dr. Paul Stimson's (forensic odontologist) dental chart and description

- Review of a radiograph of Billy Baulch's left elbow (no results documented)

DNA sampling and profile comparison were completed as a part of the current examination. Buccal swabs were obtained from Debra Baulch Hernandez, sister of Billy and Michael Baulch. The DNA profile obtained from the swabs was compared with both mitochondrial and nuclear DNA profiles obtained from the left innominate, one upper range lumbar vertebra, and the left fifth metatarsal of the ML73-3413 remains, and the cranium and ribs of ML73-3378. The following statistical conclusions were reported by UNT.

- It is 820 million times more likely that ML73-3413 is a sibling of Debra Sue Baulch Hernandez than if the decedent is unrelated to her.
- It is 10,000 times more likely that ML73-3378 (identified as Michael Baulch) is another biological sibling of Debra Sue Baulch Hernandez than if the decedent is unrelated to her.
- It is at least 379 times more likely that ML73-3413 and ML73-3378 are related as siblings than if they are unrelated.

The DNA profile comparisons are consistent with identification of ML73-3413 and ML73-3378 as Billy and Michael Baulch, respectively. ML73-3413 is identified as Billy and ML73-3378 is identified as Michael due to consistencies in disappearance dates and decomposition stages. Billy disappeared 14 months prior to the recovery of ML73-3413. The decomposition stage at recovery described above is consistent with that postmortem interval. Michael disappeared on July 17, 1973, only three weeks prior to the recovery of ML73-3378 in an articulated and fleshed state.

<u>Summary</u>

The skeletal remains of ML73-3413 are estimated to represent a White male, 16-19 years of age and 5'2"-5'9" inches tall. ML73-3413 is identified as Billy Gene Baulch, Jr. through DNA profile comparison, development of a consistent biological profile, decomposition stage at recovery, and circumstantial evidence. The remains of Billy Baulch are commingled with skeletal elements representing a minimum of one additional individual. These elements have been examined and submitted to UNT for DNA analysis. With the exception of the commingling and observation of a well-healed fracture scar on the distal left ulna, the anthropological findings are consistent with the

autopsy findings in the report filed on August 14, 1973. No perimortem skeletal trauma or pathological conditions are observed.

Sharon M. Derrick 6/30/2011

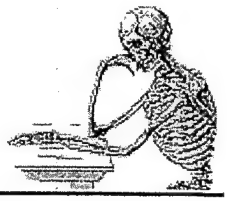
Sharon M. Derrick, Ph.D. MMDDYY
Forensic Anthropologist

Reviewed by:

6/30/2011

Jennifer C. Love, Ph.D., D-ABFA MMDDYY
Forensic Anthropology Director

Harris County Institute of Forensic Sciences
Forensic Anthropology Division
Data Sheets



(I011-00556)

Case # MC73-3413 Anthropologist S. Derrick
Date/Hour of Examination 3/11/2011 - 3/14/2011
Pathologist Jachimczyk County Harris

Scene Description
Exhumation from buried casket. Ground water seepage
Woodlawn Cemetery, 2/8/2011, Order# 2010-83018

Condition of Remains
Friable, muddy, mineral deposits, very wet, soft

Processing Procedure
Elements were handwashed in cool water and air-dried
on trays.

Personal Property
None

Positively Identified (by) HCIFS/UNT DNA results (technique) DNA (mito + nuclear)
Decedent Name Billy Gene Baulch, Jr., WM17, 5'9", 145lbs (description)

Unidentified Checklist:

Dental Chart
- ✓ Anthropologist
- ✓ Odontologist
- __ Edentulous

Radiographs N/A, Identified Case
- __ Articulated
- __ Disarticulate
- ✓ Dental → previously done by Dr. Stimson
  no electronic copies available
  identified

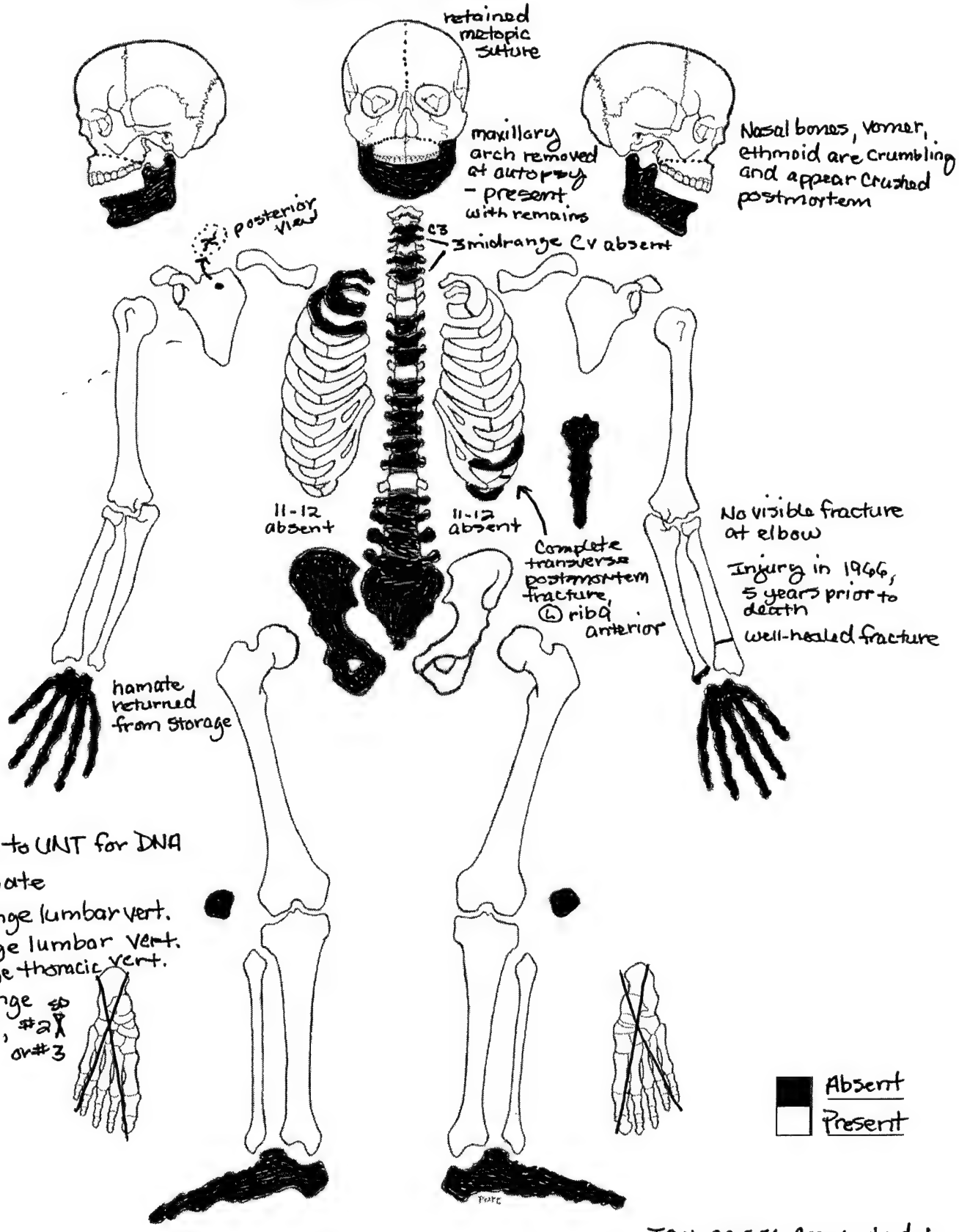
DNA
- ✓ UNT
- __ HCME Lab Archives

Photographs
- ✓ Skeletal Overview
- ✓ Biological Profile
- ✓ Reconstruction
- ✓ Trauma
- N/A Radiographs Identified

Dissemination N/A, Identified case
- __ Law Enforcement
- __ Media
- __ NCMEC #
- __ NCIC #
- __ NamUs #

Update Databases ~~N/A~~ SO
- ✓ Justice Tracks
- ✓ Anthropology Logbook

Harris County Medical Examiner's Office
Forensic Anthropology Division
Skeleton – Anterior View



*Submitted to UNT for DNA
R. innominate
1 upper range lumbar vert.
1 mid-range lumbar vert.
1 mid-range thoracic vert.
1 upper range (R) rib, #2 or #3

ID11-00556 Converted to
Case Number ML73-3413
Analyst S. Dennick
Date 2/10/2011

Harris County Institute of Forensic Sciences
Forensic Anthropology Division
Fordisc Measurements

Used left side measurements in FORDIC when possible

CRANIAL MEASUREMENTS (Pages 52-60)

		Left	Right
1. MAXIMUM LENGTH (g-op):	185	13. NASAL HEIGHT (n-ns):	48*	
2. MAXIMUM BREADTH (eu-eu):	135	14. NASAL BREADTH (al-al):	23*	
3. BIZYGOMATIC BREADTH (zy-zy):	132	15. ORBITAL BREADTH (d-ec):	44	___
4. BASION-BREGMA (ba-b):	137	16. ORBITAL HEIGHT (OBH):	30	___
5. CRANIAL BASE LENGTH (ba-n):	103	17. BIORBITAL BR. (ec-ec):	97	
6. BASION-PROSTHION L. (ba-pr):	99*	18. INTERORBITAL BR. (d-d):	21	
7. MAX.-ALVEOLAR BR. (ecm-ecm):	62*	19. FRONTAL CHORD (n-b):	107	
8. MAX.-ALVEOLAR L. (pr-alv):	54*	20. PARIETAL CHORD (b-l):	121	
9. BIAURICULAR BREADTH (ALB):	119	21. OCCIPITAL CHORD (l-o):	94	
10. UPPER FACIAL HGT. (n-pr):	63*	22. FORAMEN MAGNUM L. (ba-o):	36	
11. MIN. FRONTAL BR. (ft-ft):	97	23. FORAMEN MAGNUM BR (FOB):	33	
12. UPPER FACIAL BR. (fmt-fmt):	104	24. MASTOID LENGTH (MDH):	30	30

MANDIBULAR MEASUREMENTS (Pages 61-63)

No mandible

	Left	Right		Left	Right
25. CHIN HEIGHT (gn-id):	___		30. MIN. RAMUS BREADTH:	___	___
26. BODY HEIGHT at MENTAL FOR:	___	___	31. MAX. RAMUS BREADTH:	___	___
27. BODY THICKNESS at M. FOR:	___	___	32. MAX. RAMUS HEIGHT:*	___	
28. BIGONIAL DIAMETER (go-go):	___		33. MAND. LENGTH:*	___	
29. BICONDYLAR BR. (cdl-cdl):	___		34. MAND. ANGLE:*	___	

* Record only if mandibulometer is used.

POSTCRANIAL MEASUREMENTS (Pages 64-76)

CLAVICLE: Epiph. P/A:	Left	Right
35. MAXIMUM LENGTH:	146	151
36. SAGITTAL DIAM. at MIDSH:	15	14
37. VERTICAL DIAM. at MIDSH:	10	10

SCAPULA: Epiph. P/A:	Left	Right
38. HEIGHT:	146	148
39. BREADTH:	101	102

HUMERUS: Epiph. P/A:	Left	Right
40. MAXIMUM LENGTH:	313	315
41. EPICONDYLAR BREADTH:	61	62
42. MAX. VERT. DIAM. of HEAD:	48	48
43. MAX. DIAM. at MIDSHAFT:	24	24
44. MIN. DIAM. at MIDSHAFT:	18	19

RADIUS: Epiph. P/A:	Left	Right
45. MAXIMUM LENGTH:	243	open epiph
46. SAGITTAL DIAM. at MIDSH:	12	12
47. TRANSV. DIAM. at MIDSH:	16	16

ULNA: Epiph. P/A:	Left	Right
48. MAXIMUM LENGTH:	no epiphy.	261
49. DORSO-VOLAR DIAMETER:	16	16
50. TRANSVERSE DIAMETER:	15	15
51. PHYSIOLOGICAL LENGTH:	no epiphy.	240
52. MIN. CIRCUMFERENCE:	40	40

SACRUM: No. Segments: Absent
53. ANTERIOR HEIGHT: ___
54. ANTERIOR SURFACE BREADTH: ___
55. MAX. BREADTH (S-1) ___

INNOMINATE: Epiph. P/A:	Left	Right
56. HEIGHT:	207	209
57. ILIAC BREADTH:	154	156
58. PUBIS LENGTH:	79	85
59. ISCHIUM LENGTH:	78	79

(not likely to belong to case)

FEMUR: Epiph. P/A:	Left	Right
60. MAXIMUM LENGTH:	431	434
61. BICONDYLAR LENGTH:	429	429
62. EPICONDYLAR BREADTH:	81	80
63. MAX. DIAM. of HEAD:	47	48
64. A-P SUBTROCH. DIAMETER:	29	29
65. TRANSV. SUBTROCH. DIAM:	32	32
66. A-P DIAM. MIDSH:	26	26
67. TRANVS. DIAM. MIDSH:	28	29
68. CIRCUMFERENCE AT MIDSH:	90	90

TIBIA: Epiph. P/A:	Left	Right
69. CONDYLO-MALLEOLAR LEN:	366	367
70. MAX. PROX. EPIPH. BR:	77	77
71. MAX. DIST. EPIPH. BR:	52	52
72. MAX. DIAM. NUTRIENT FOR:	38	38
73. TRANSV. DIAM. NUTR. FOR:	24	24
74. CIRCUM. AT NUTR. FOR:	100	100

FIBULA: Epiph. P/A:	Left	Right
75. MAXIMUM LENGTH:	360	363
76. MAX. DIAM. at MIDSHAFT:	17	18

CALCANEUS: Epiph. P/A: Absent

	Left	Right
77. MAXIMUM LENGTH:	___	___
78. MIDDLE BREADTH:	___	___

Case Number ML13-3413
Analyst S. Derrick
Date 3/11/2011

* = reconstructed

DF results using 39 variables:

CLAAPD	CLAVRD	CLAXLN	FEMBLN	FEMCIR	FEMEBR
FEMHDD	FEMMAP	FEMMTV	FEMSAP	FEMSTV	FEMXLN
FIBMDM	FIBXLN	HUMEBR	HUMHDD	HUMMWD	HUMMXD
HUMXLN	ILIABR	INNOHT	ISCHLN	PUBCLN	RADAPD
RADTVD	RADXLN	SCAPBR	SCAPHT	TIBCIR	TIBDEB
TIBNFT	TIBNFX	TIBPEB	TIBXLN	ULNCIR	ULNDVD
ULNPHL	ULNTVD	ULNXLN			

From Group	Total Number	Into Group BF	BM	WF	WM	Percent Correct
BF	18	14	1	3	0	77.8 %
BM	35	0	32	0	3	91.4 %
WF	55	4	0	50	1	90.9 %
WM	102	3	6	0	93	91.2 %

Total Correct: 189 out of 210 (90.0 %) *** CROSSVALIDATED ***

Multigroup Classification of Current Case

Group	Classified into	Distance from	Probabilities Posterior	Typ F	Typ Chi	Typ R
WM	**WM**	55.7	0.998	0.657	0.040	0.304 (71/103)
BM		68.2	0.002	-----	0.003	0.057 (33/36)
BF		73.0	0.000	-----	0.001	0.053 (18/19)
WF		78.7	0.000	0.913	0.000	**0.018 (56/56)**

Current Case is closest to WMs

Current Case		Chk	Group Means BF 18	BM 35	WF 55	WM 102
CLAAPD	15	+	11.1	13.8	10.4	12.8
CLAVRD	10		9.7	11.1	9.3	11.3
CLAXLN	146		140.8	159.5	139.0	156.8
FEMBLN	429	-	434.4	479.9	431.1	469.2
FEMCIR	90		80.5	93.1	82.0	92.2
FEMEBR	81		72.4	83.2	75.7	85.0
FEMHDD	47		40.8	47.2	42.3	48.4
FEMMAP	26	-	27.2	31.5	27.4	30.9
FEMMTV	28		23.8	28.0	24.3	27.8
FEMSAP	29	+	25.1	28.7	25.9	28.7
FEMSTV	32		28.3	32.1	29.2	32.1
FEMXLN	431	-	438.9	483.6	435.2	472.5
FIBMDM	17	+	13.8	15.3	14.5	15.8
FIBXLN	360		357.3	395.7	350.8	385.7
HUMEBR	61		54.4	64.2	55.9	64.5
HUMHDD	48		40.3	46.7	42.8	48.6
HUMMWD	18		15.9	19.3	15.5	18.8
HUMMXD	24	+	20.2	23.7	20.0	23.3
HUMXLN	313		304.8	340.4	304.1	335.5
ILIABR	154		142.1	153.6	155.6	160.2
INNOHT	207		189.3	211.0	202.4	223.0
ISCHLN	78		77.5	88.9	81.8	91.0
PUBCLN	79		75.0	76.0	85.3	82.7
RADAPD	12		11.4	13.0	10.4	12.9
RADTVD	16		13.3	16.0	13.7	16.6
RADXLN	243		235.2	266.9	227.8	252.9
SCAPBR	101		94.1	111.1	95.8	108.0
SCAPHT	146		137.1	160.8	141.9	163.0
TIBCIR	100		86.4	100.5	85.9	97.8
TIBDEB	52		45.4	51.8	46.5	52.2
TIBNFT	24		22.9	26.6	22.1	25.5

mC74-3413
J. Derrick

TIBNFX	38	+	31.3	36.7	32.0	36.5
TIBPEB	77		68.3	78.3	69.8	78.9
TIBXLN	366		363.7	403.4	356.9	391.6
ULNCIR	40	+	32.4	37.4	34.0	37.9
ULNDVD	16	+	12.6	15.7	12.0	15.4
ULNPHL	240		224.2	253.8	216.8	239.8
ULNTVD	15		13.4	15.9	13.3	16.3
ULNXLN	261		252.2	285.0	244.3	271.1

Natural Log of Determinant = 79.9389

MC73-3413
B. Derrick

DF results using 5 Forward % selected (min: 1 max: 20, out of 39) variables:
INNOHT RADXLN TIBPEB ILIABR SCAPHT

From Group	Total Number	Into Group BF	BM	WF	WM	Percent Correct
BF	18	16	0	1	1	88.9 %
BM	35	1	33	0	1	94.3 %
WF	55	4	0	51	0	92.7 %
WM	102	3	10	3	86	84.3 %

Total Correct: 186 out of 210 (88.6 %) *** CROSSVALIDATED ***

Multigroup Classification of Current Case

Group	Classified into	Distance from	Probabilities Posterior	Typ F	Typ Chi	Typ R
WM	**WM**	5.0	0.478	0.450	0.414	0.451 (56/103)
BF		6.4	0.238	0.494	0.269	0.056 (17/19)
BM		7.1	0.170	0.327	0.215	0.257 (26/36)
WF		7.9	0.114	0.228	0.163	**0.036 (53/56)**

Current Case is closest to WMs

Current Case	Chk	Group Means BF 18	BM 35	WF 55	WM 102
INNOHT	207	189.3	211.0	202.4	223.0
RADXLN	243	235.2	266.9	227.8	252.9
TIBPEB	77	68.3	78.3	69.8	78.9
ILIABR	154	142.1	153.6	155.6	160.2
SCAPHT	146	137.1	160.8	141.9	163.0

Natural Log of Determinant = 19.3565

mL73-3413
S. Derrick

FORDISC 3.1 Analysis of Current Case Cranial M & F 3/17/2011 9:55:06 AM

DF results using 17 variables:
AUB BBH BNL BPL FRC GOL MAB NLB NLH OBB
OBH OCC PAC UFHT WFB XCB ZYB
Variables removed: UFBR MDH MAL DKB EKB FOL FOB

From Group	Total Number	Into Group AF	AM	BF	BM	CHM	GTM	HF	HM	JF	JM	VM	WF	WM	Percent Correct
AF	29	11	7	1	0	1	2	3	1	0	0	1	2	0	37.9 %
AM	51	3	33	0	1	4	2	1	1	1	2	2	0	1	64.7 %
BF	70	2	0	38	4	0	4	8	3	3	0	1	6	1	54.3 %
BM	95	4	1	9	52	6	1	2	6	3	4	2	0	5	54.7 %
CHM	69	4	0	0	8	33	3	1	2	1	11	5	0	1	47.8 %
GTM	68	7	3	3	2	0	41	5	2	0	2	2	1	0	60.3 %
HF	42	1	0	3	0	1	5	22	0	2	1	3	4	0	52.4 %
HM	166	13	7	2	16	15	25	15	30	1	17	9	2	14	18.1 %
JF	118	0	0	4	0	2	0	0	0	112	0	0	0	0	94.9 %
JM	168	5	10	0	4	21	10	8	6	2	82	14	2	4	48.8 %
VM	48	0	0	0	0	4	3	6	0	2	4	29	0	0	60.4 %
WF	160	1	0	7	0	1	0	8	1	0	2	3	122	15	76.3 %
WM	261	6	2	1	8	5	0	3	1	0	14	2	19	200	76.6 %

Total Correct: 805 out of 1345 (59.9 %) *** CROSSVALIDATED ***

Multigroup Classification of Current Case

Group	Classified into	Distance from	Probabilities Posterior	Typ F	Typ Chi	Typ R	
WM	**WM**	20.2	0.774	0.345	0.265	0.406	(155/262)
WF		24.5	0.090	0.209	0.107	0.131	(139/161)
BM		25.7	0.049	0.255	0.080	0.147	(81/96)
AM		27.2	0.023	0.419	0.055	0.176	(42/52)
AF		27.3	0.022	0.785	0.054	0.069	(27/30)
CHM		28.3	0.013	0.257	**0.041**	**0.029**	**(67/70)**
HM		28.7	0.011	0.097	**0.038**	0.096	(150/167)
JM		29.3	0.008	0.085	**0.032**	**0.012**	**(166/169)**
JF		29.7	0.007	0.111	**0.029**	0.008	(119/119)
BF		31.9	0.002	0.163	**0.015**	**0.014**	**(70/71)**
HF		33.5	0.001	0.349	0.010	**0.023**	**(43/43)**
GTM		36.4	0.000	0.097	0.004	**0.014**	**(69/69)**
VM		37.9	0.000	0.184	0.003	**0.020**	**(49/49)**

Current Case is closest to WMs

Current Case		Chk	Group Means AF 29	AM 51	BF 70	BM 95	CHM 69	GTM 68	HF 42	HM 166	JF 118	JM 168	VM 48	WF 160	WM 261
AUB	119		125.6	132.1	115.6	120.7	123.9	123.7	119.0	124.1	112.0	125.7	122.8	116.4	123.2
BBH	137		129.6	133.4	131.2	137.3	139.7	133.2	131.7	136.5	132.6	138.8	137.8	134.1	141.9

p1 of 14

Duck Hybrid

MC78-3413
S. Dominick

BNL	103		99.9	103.0	98.3	104.4	100.3	98.5	95.6	100.8	95.2	101.5	97.6	99.2	106.3
BPL	99		96.7	100.1	98.8	104.4	97.1	97.9	93.0	98.7	94.2	97.7	95.4	92.2	98.0
FRC	107		107.6	110.8	107.8	112.6	113.2	106.5	106.4	110.9	107.1	112.6	112.1	109.2	114.8
GOL	185		177.3	180.1	178.0	186.8	181.2	173.2	171.2	178.0	171.6	180.1	172.4	177.5	187.9
MAB	62		62.8	66.2	62.5	66.2	65.4	64.5	62.6	65.4	61.6	65.5	66.4	58.0	61.7
NLB	23		25.4	26.1	25.0	26.3	25.9	25.5	24.0	24.9	24.8	25.1	26.2	22.3	23.7
NLH	48	-	51.5	53.8	48.1	52.4	52.3	51.8	49.3	52.1	48.2	52.6	53.1	48.9	52.9
OBB	44	+	40.7	42.2	38.4	40.6	38.8	38.9	38.8	39.9	38.1	39.2	38.4	39.1	41.2
OBH	30	--	35.1	35.2	34.4	35.1	34.1	36.1	35.5	35.3	33.8	34.7	33.8	33.2	33.8
OCC	94		93.7	93.9	97.3	98.7	98.2	95.6	96.2	97.5	96.8	101.5	98.4	97.8	100.7
PAC	121	+	107.7	110.1	112.6	117.0	115.1	112.3	108.7	111.4	108.5	111.3	110.4	112.8	118.3
UFHT	63	-	70.8	73.4	66.7	73.0	72.1	71.5	67.6	73.7	65.8	71.2	71.5	67.6	73.9
WFB	97		93.0	97.1	93.2	96.0	92.5	92.9	92.2	94.0	90.0	94.3	94.7	93.4	96.9
XCB	135		137.0	143.0	132.7	135.4	139.2	136.4	135.4	138.2	136.3	141.3	140.5	135.3	140.3
ZYB	132		131.8	141.2	121.9	130.5	133.0	131.5	123.7	131.1	125.4	134.2	130.0	120.2	129.6

Natural Log of Determinant = 42.2726

p. 8 of 14

M273-3413
S. Derrick

Gus Hotaling

DF results using 11 Forward % selected (min: 1 max: 20, out of 16) variables:
GOL ZYB BBH NLB BNL OCC BPL OBH WFB NLH
PAC
Variables removed: UFBR MDH MAL DKB EKB FOL FOB

From Group	Total Number	Into Group AM	BM	CHM	GTM	HM	JM	VM	WM	Percent Correct
AM	51	34	2	4	5	0	3	2	1	66.7 %
BM	96	2	64	2	6	9	4	2	7	66.7 %
CHM	69	1	8	35	4	3	10	5	3	50.7 %
GTM	68	4	1	0	52	8	0	2	1	76.5 %
HM	172	5	20	21	40	30	22	15	19	17.4 %
JM	168	22	8	24	6	19	71	14	4	42.3 %
VM	48	0	0	4	3	2	5	33	1	68.8 %
WM	263	1	17	9	1	12	11	8	204	77.6 %

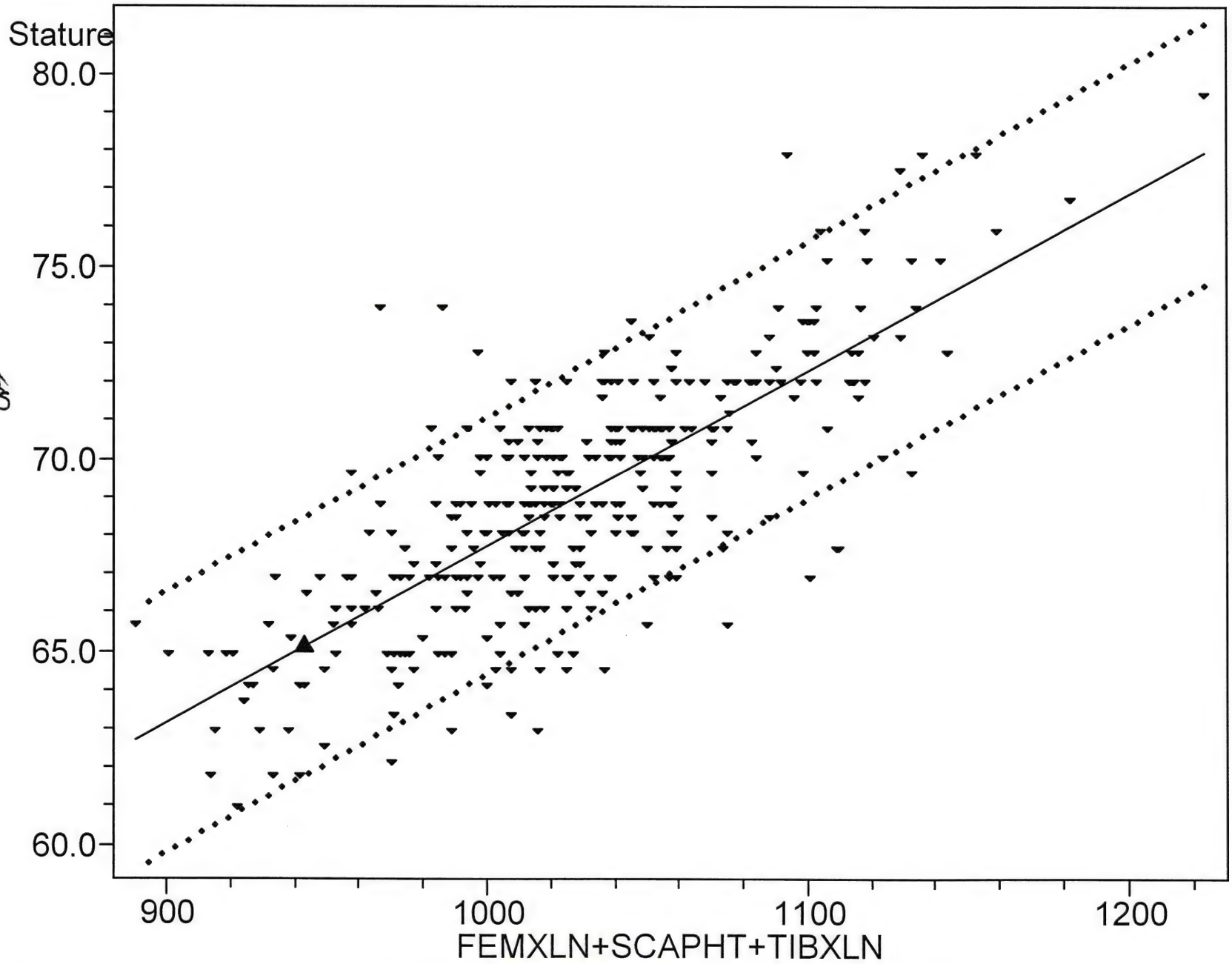
Total Correct: 523 out of 935 (55.9 %) *** CROSSVALIDATED ***

Multigroup Classification of Current Case

Group	Classified into	Distance from	Probabilities Posterior	Typ F	Typ Chi	Typ R	
WM	**WM**	8.8	0.645	0.677	0.645	0.635	(96/264)
CHM		12.6	0.096	0.492	0.323	0.130	(60/70)
JM		12.8	0.086	0.376	0.308	0.262	(124/169)
HM		13.2	0.070	0.346	0.280	0.326	(116/173)
BM		13.4	0.062	0.385	0.265	0.385	(59/97)
AM		14.7	0.033	0.425	0.197	0.255	(38/52)
GTM		18.4	0.005	0.196	0.072	**0.044**	**(65/69)**
VM		19.5	0.003	0.229	0.053	**0.042**	**(46/49)**

Current Case is closest to WMs

Current Case		Chk	Group Means AM 51	BM 96	CHM 69	GTM 68	HM 172	JM 168	VM 48	WM 263
GOL	185		180.1	186.8	181.2	173.2	178.0	180.1	172.4	187.9
ZYB	132		141.2	130.5	133.0	131.5	131.2	134.2	130.0	129.6
BBH	137		133.4	137.3	139.7	133.2	136.5	138.8	137.8	141.9
NLB	23	-	26.1	26.3	25.9	25.5	24.9	25.1	26.2	23.7
BNL	103		103.0	104.4	100.3	98.5	100.7	101.5	97.6	106.3
OCC	94		93.9	98.6	98.2	95.6	97.7	101.5	98.4	100.8



4/27/2011 FORDISC 3.1 : Estimated Stature = 62.0 to 68.6 inches (90% prediction interval)

Harris County Institute of Forensic Sciences
Forensic Anthropology Division
Estimation of Race
(Gill and Rhine 1990, Base 1987, Burns 1999)

ESTIMATION OF RACE White/Asian-Native American Admixture . + = *NOTICABLE*, ++ = *PROMINENT*

	CAUCASIAN	AFRICAN-AMERICAN	ASIAN/NATIVE AMERICAN
Skull Shape:	____ High, Narrow	____Low w/Postbregmatic Depression	+ Low, Sloping
Skull Height:	____ Rounded, Narrow	____Low and Flat	+ Rounded, High
Face Shape:	____ Narrow, Long	____ Prognathic	+ Broad, Flat
Eye Orbits:	____ Slanting Square, Large	____ Laterally Low and Small	+ Square
Zygomatics:	++ Small- Retreating Malars	____Small, Retreating Malars	____ Robust and Flaring
Zygomaxillary Suture:	____ Jagged, S-Shaped	____Curved or S-Shaped	+ Angled
Nasal Sill:	+ Sharp, Protruding	____ Guttered	____ Sharp
Nasal Aperture:	+ Narrow	____ Wide	____ Medium
Nasal Spine: Not present	____ Large, Long	____ Little or None	____ Medium, Tilted
Nasal Bones:	+ High, Arched	____ Low, Flat Wide Arch	____ Low "Tented" Arched
Alveolar Prognathism:	+ Narrow, Little	____Pronounced	____ Reduced
Palatal Shape:	____ Parabolic, Narrow	____ Hyperbolic	++ Elliptic
Palatal Suture:	____ Z-Shaped	____ Arched	+ Straight
Chin: Not present	____ Square, Projecting	____ Retreating	____ Blunt
Dentition:	____ Crowded, Impacted M3	____ Crenulated Molars	+ Not Crowded
Bite: mandible absent	____ Overbite	____ Overbite, Prognathic	____ Edge-to-Edge
Femur Curvature:	+ Arched (L)	____ Flat	+ Little (R)

Case Number ML73-3413
Analyst S. Derrick
Date 3/14/2011

Harris County Institute of Forensic Sciences
Forensic Anthropology Division
Estimation of Sex
(Buikstra and Ubelaker 1994, Ubelaker 1989, Bass 1987)

Young individual

	FEMALE			MALE	
	-2	-1	0	+1	+2
CRANIAL					
Supra-Orbital Margin		-1			
Supra-Orbital Ridge		-1			
Mastoid Process			0		
Zygomatic Arch Extension					+2
Nuchal Crest			0		
Mental Eminence	Not present				
Mandibular Ramus	Not present				
Temporalis Attachment		-1			
POSTCRANIAL					
Sciatic Notch					+2

(Phenice 1969) Ventral Arc	☐ Presence	☒ Absence
Subpubic Concavity	☐ Concave	☒ Convex
Ischiopubic Concavity	☐ Presence	☒ Absence
Pubic Length	☐ Long	☒ Short
Sacral Attachment	☐ Elevated	☒ Flat
Sacrum Not present	☐ Straight	☐ Curved

(Stewart 1979)	Femoral Head Diameter	<42.5mm	43-46mm	>47.5mm
	Humeral Head Diameter	<42.7	43-46mm	>47.2mm

Case Number ML73-3413
Analyst S. Derrick
Date 3/14/2011

Harris County Institute of Forensic Sciences
Forensic Anthropology Division
Age Estimation

ESTIMATION OF AGE: 16-19 years

POSTCRANIAL:

Pubic Symphysis:

	* using LEFT	Right Probably Does not belong to (RIGHT) ML73-3413
FEMALE (Suchey-Brooks 1990, Suchey and Katz 1986)	_____	_____ 15-23 yrs range 95%
MALE (Suchey-Brooks 1990, Suchey and Katz 1986)	I-1	I-1 18.5 yrs $\bar{x}$ S.D=2.1
MALE (Todd 1920, 1921)	I:___II:___III:___	I:___II:___III:___
MALE (Suchey-Brooks 1990, Suchey and Katz 1986)	I:___II:___III:___	I:___II:___III:___
FEMALE (Suchey-Brooks 1990, Suchey and Katz 1986)	I:___II:___III:___	I:___II:___III:___

Symphyseal face (L) innom. is somewhat eroded. Slightly more developed than right innominate that does not belong to remains. clear absence of upper/lower delimitation. marked ridges/furrows present.

Sternal Rib End Changes (Iscan et al 1984, 1985, 1986)

Rib#: 4 Phase: 0-1a Rib#:___ Phase:___

<17-19 yrs

(L) rib end smooth, minimally convex, no rim devel.

Epiphyseal Closure (1 = No Union, 2 = Partial Union, 3 = Complete Union)
(Moore-Jansen et al 1994 page 8-9, Webb and Suchey 1985) metopic suture retained, ribs=heads not fused one in process 17-25 yrs

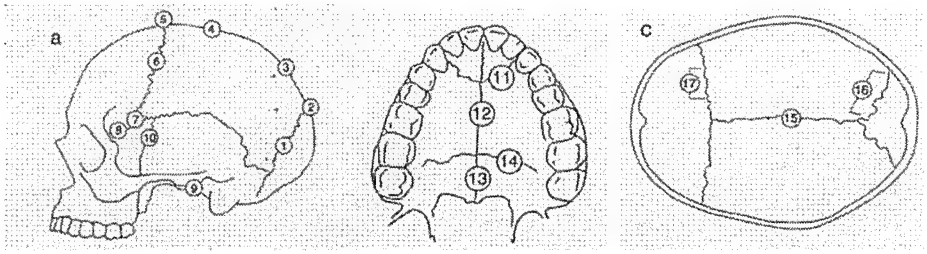
38) Basilar Suture 2	47) Lumbar Vert Rim 2	56) Proximal Radius 3
39) Medial Clavicle 0	48) Sacrum (S1/2) ___ / N/A	57) distal Radius 2
40) Atlas – Anterior 3	49) Sacrum (S2/3) ___ / N/A	58) Distal Ulna 2
41) Atlas – Posterior 2	50) Sacrum (S3/4) ___ / N/A	59) ~~Distal~~ Ulna 3 Proximal
42) Axis – Anterior 3	(L) 51) Innom. Prim. Elem 3 Still fusing in acetab SD	60) Femur Head 2
43) Axis – Posterior ~~2~~ 3 SD	52) Ischial Tuberosity 2	61) G. Trochanter 3
44) Cervical Vert Rim 3	53) Anterior Illiac Crest 0	62) Distal Femur 2
45) Thoracic Vert Rim 2	54) Proximal Humerus 2	63) Proximal Tibia 2
46) L5 Body – Arch N/A	55) Medial Epic. Hum. 2	64) Distal Tibia 3

Illiac Crest (2)

CRANIAL: The decedent is too young for accuracy w/ this method.

Cranial Suture Closure (Baker 1984, Mann et al 1987, <eindl and Lovejoy 1985, Todd and Lyon 1924, 1925)
(0=open, 1=Minimal Closure, 2=Significant Closure, 3=Complete Obliteration/Buikstra and Ubelaker 1994 pages 32-34).

1)	0	10)	0
2)	1	11)	1
3)	1	12)	0
4)	0	13)	0
5)	0	14)	1
6)	0	15)	0
7)	1	16)	0
8)	1	17)	0
9)	1		



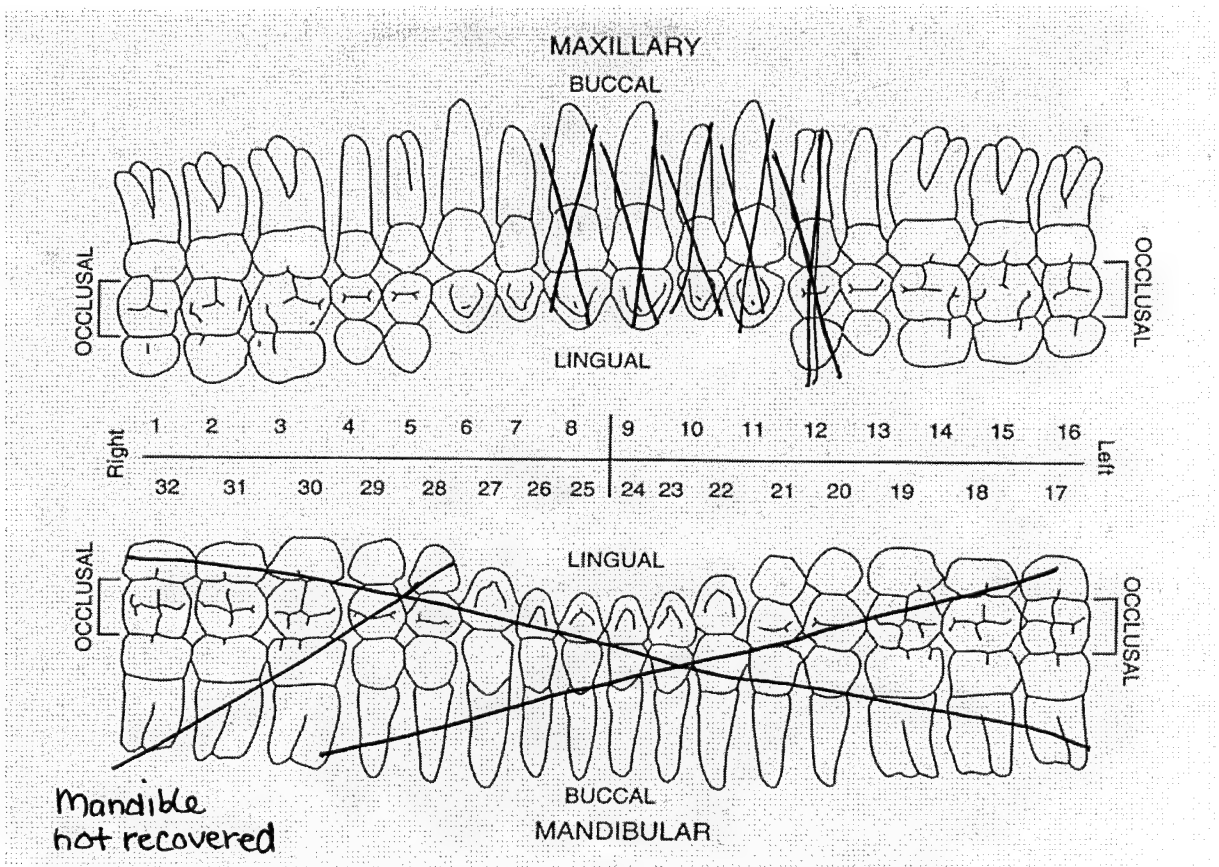
Vault Score (Sites 1-7) 3 Lateral Score (Sites 6-10) 3

Other Indicators of Age: Little to no wear on teeth. Third molar roots open, 3/4 developed. (16 yrs)
Rib heads fusing to neck (17-25 years), one only

Case Number ML73-3413
Analyst S. Dennick
Date 3/14/2011

05/21/10

Harris County Institute of Forensic Sciences
Forensic Anthropology Division
Dentition Chart - Permanent



Mandible not recovered

* No caries noted, no reconstructions, cusp wear on 3,14

	1. erupting, 3/4, open roots 16.4 yrs (Smith, 1991)	17.	
	2. pit in occlusal buccal groove	18.	
Carabelli's cusp	3. pit in occlusal buccal groove	19.	
	4.	20.	
	5. pits in occlusal mesial + distal grooves	21.	
Smith 1991	6. root complete, 11+ yrs	22.	
8D	7. shovel, root complete, 8.3+ yrs	23.	
	8.	24.	
	9.	25.	
	10.	26.	
	11.	27.	
	12.	28.	
	13.	29.	
	14. Carabelli's cusp, pitting in occ. grooves	30.	
pitting in grooves ←	15. apex 1/2 closed 13.9+ yrs Smith, 1991	31.	
	16. erupting, 3/4, open roots 16.4 yrs	32.	

* Dr. Stimson noted occlusal caries on 2, 3, 14, 15 must be very subtle, in grooves? — Observed as pits

Case Number ML73-3413
Analyst J. Dunick
Date 3/14/2011

STATE OF TEXAS

CERTIFICATE OF DEATH

STATE FILE NO.

1. PLACE OF DEATH
a. COUNTY: Chambers
b. CITY OR TOWN (If outside city limits, give precinct no.): (found) Approx. 1917 ft. E. of the W.
c. LENGTH OF STAY in I b.:
d. NAME OF HOSPITAL OR INSTITUTION (If not in hospital, give street address or location): 122 ft. S. of Hwy. 87 County line of Chambers Co./ approx./
e. IS PLACE OF DEATH INSIDE CITY LIMITS? YES ☐ NO ☐

2. USUAL RESIDENCE (Where deceased lived. If institution: residence before admission)
a. STATE: TEXAS
b. COUNTY: HARRIS
c. CITY OR TOWN (If outside city limits, give precinct no.): Houston
d. STREET ADDRESS (If rural, give location): 439 West 16th
e. IS RESIDENCE INSIDE CITY LIMITS? YES ☒ NO ☐
f. IS RESIDENCE ON A FARM? YES ☐ NO ☒

3. NAME OF DECEASED (Type or print): (a) First: BILLY (b) Middle: GENE (c) Last: BAULCH, Jr.

4. DATE OF DEATH: Found 8-13-73

5. SEX: Male

6. COLOR OR RACE: White

7. Married ☐ Never Married ☒ Widowed ☐ Divorced ☐

8. DATE OF BIRTH: April 21, 1955

9. AGE (In years last birthday): 18

IF UNDER 1 YEAR: Months / Days
IF UNDER 24 HRS.: Hours / Minutes

10a. USUAL OCCUPATION (Give kind of work done during most of working life, even if retired): Student

10b. KIND OF BUSINESS OR INDUSTRY: School

11. BIRTHPLACE (State or foreign country): Houston, Texas

12. CITIZEN OF WHAT COUNTRY?: USA

13. FATHER'S NAME: Billy Baulch, Sr.

14. MOTHER'S MAIDEN NAME: Maggie Jane Cox

15. WAS DECEASED EVER IN U.S. ARMED FORCES? (Yes, no, or unknown): No (If yes, give war or dates of service)

16. SOCIAL SECURITY NO.:

17. INFORMANT:

MEDICAL CERTIFICATION

18. CAUSE OF DEATH [Enter only one cause per line for (a), (b), and (c).]
PART I. DEATH WAS CAUSED BY:
IMMEDIATE CAUSE (a): Asphyxia due to strangulation.
Conditions, if any, which gave rise to above cause (a), stating the underlying cause last.
DUE TO (b):
DUE TO (c):
INTERVAL BETWEEN ONSET AND DEATH:

PART II. OTHER SIGNIFICANT CONDITIONS CONTRIBUTING TO DEATH BUT NOT RELATED TO THE TERMINAL DISEASE CONDITION GIVEN IN PART I(a)

19. WAS AUTOPSY PERFORMED? YES ☒ NO ☐

20a. ACCIDENT ☐ SUICIDE ☐ HOMICIDE ☒

20b. DESCRIBE HOW INJURY OCCURRED. (Enter nature of injury in Part I or Part II of Item 18.): Strangled.

20c. TIME OF INJURY: Hour UNK a.m. p.m. Day found Year 8 13 73

20d. INJURY OCCURRED: WHILE AT WORK ☐ NOT WHILE AT WORK ☒

20e. PLACE OF INJURY (e.g., in or about home, farm, factory, street, office building, etc.): (found) Chambers County

20f. CITY, TOWN, OR LOCATION: Chambers COUNTY: found STATE: Texas

21. I hereby certify that I attended the deceased from ____ to ____, 19____ and last saw the deceased alive on ____, 19____. Death occurred at 8-13-73 m. on the date stated above, and to the best of my knowledge, from the causes stated. from autopsy findings

22a. SIGNATURE (Degree or title): Joseph A. Jachimczyk, M.D.

22b. ADDRESS: 209 Courthouse Houston, Texas

22c. DATE SIGNED: 10-17-73

23a. BURIAL, CREMATION, REMOVAL (Specify): Burial

23b. DATE: October 12, 1973

23c. NAME OF CEMETERY OR CREMATORY: Woodlawn Garden of Memories

23d. LOCATION (City, town, or county): Houston (State): Texas

24. FUNERAL DIRECTOR'S SIGNATURE: HEIGHTS FUNERAL HOME

25a. REGISTRAR'S FILE NO.:

25b. DATE REC'D BY LOCAL REGISTRAR:

25c. REGISTRAR'S SIGNATURE:

Autopsy

XXiewX

INVESTIGATOR'S REPORT

Investigator: H. C. Gregory

Case No. 73 - 3413

Decedent: Billy Gene Baulch, Jr. Race W Sex M Age 17

Address: 439 West 16th Street, Houston, Texas

Death: FOUND August 13, 1973 Approx. Time 4:00 XXXX P.M.

Place of Death: Chambers County, approximately 1917 feet east of the West County line of Chambers County, approximately 123 feet south of Hwy. 87

Place of Inquest:

Date and Time of Inquest: August 14, 1973 4:50 XXXX P.M.

Location, Position, and Surroundings of Body:
This common grave was known as Chambers County Grave Site #4. This body was known as Chambers County Body #5.

Clothing: There was no clothing.

Information:
The decedent, according to Chambers County Sheriff Louis Otter, was disintered from a grave site at the above location at the above time. The grave appeared to be about 36 inches deep, 24 inches wide and 42 inches in length. There was no lime-like substance or noticeable foreign matter in the grave, other than the remains of Medicolegal Case 73-3412 and Medicolegal Case 73-3413, a cord similar to a venetian blind cord and plastic covering. The decedent, according to Sheriff Otter, had a smaller bone structure than that of Unknown #25 (Case 73 - 3412). The decedent and Case 73-3412 (Unknown #25) were atop one another in a common grave with their respective heads at opposite ends of the grave.

H. C. Gregory
H. C. Gregory NN

(See Companion Cases 73-3365, 73-3366, 73-3408, 73-3409 and 73-3412)

Property: No jewelry, buttons, buckles or personal effects were located in the grave.

Transferred to Morgue by: Sterling Funeral Home, Dayton, Texas

Funeral Home Conducting Service: Heights Funeral Home, Houston, Texas

SUPPLEMENTAL

INVESTIGATOR'S REPORT

Autopsy

View

Investigator: H. C. Gregory

Case No. 73 - 3413

Decedent: _____ Race ____ Sex ____ Age ____

Address: _____

Death: _____ Approx. Time _____ A.M. P.M.

Place of Death: _____

Place of Inquest: _____

Date and Time of Inquest: _____ A.M. P.M.

Location, Position, and Surroundings of Body:

Clothing:

Information:

The following information was furnished on August 13, 1973, by Houston Police Department Homicide Detective Donovan regarding Billy Baulch, 17 year old white male, 5 feet 9 inches, 145 pounds, 439 West 16th Street, Houston, Texas. Billy Baulch had been missing since May 21, 1972. The suspect Brooks said that Billy Baulch was one of the decedents. Billy Baulch had a chip in his upper left lateral incisor. An X-ray of Billy Baulch's left elbow will be furnished to this department, revealing a fracture which occurred in 1966.

X-ray labeled "Billy Baulch" and a black and white photograph of Billy and Mike Baulch were turned over to H. C. Gregory at the Harris County Morgue on August 13, 1973, by Houston Police Department Officers A. J. Toepoel and E. E. Benningfield.

H. C. Gregory

H. C. Gregory

Property:

Transferred to Morgue by:

Funeral Home Conducting Service:

STATE OF TEXAS

CERTIFICATE OF DEATH

STATE FILE NO.

TEXAS DEPARTMENT OF HEALTH — BUREAU OF VITAL STATISTICS

1. PLACE OF DEATH
a. COUNTY: Chambers
b. CITY OR TOWN (If outside city limits, give precinct no.): (found) Approx. 1917 ft. E. of the W.
c. LENGTH OF STAY in 1 b.:
d. NAME OF HOSPITAL OR INSTITUTION (If not in hospital, give street address): 128 ft. S. of Hwy. 87 County line of Chambers Co./ approx./
e. IS PLACE OF DEATH INSIDE CITY LIMITS? YES ☐ NO ☐

2. USUAL RESIDENCE (Where deceased lived. If institution: residence before admission)
a. STATE: TEXAS
b. COUNTY: HARRIS
c. CITY OR TOWN (If outside city limits, give precinct no.): Houston
d. STREET ADDRESS (If rural, give location): 439 West 16th
e. IS RESIDENCE INSIDE CITY LIMITS? YES ☒ NO ☐
f. IS RESIDENCE ON A FARM? YES ☐ NO ☒

3. NAME OF DECEASED (Type or print): (a) First: BILLY (b) Middle: GENE (c) Last: BAULCH, Jr.

4. DATE OF DEATH: Found 8-13-73

5. SEX: Male

6. COLOR OR RACE: White

7. Married ☐ Never Married ☒ Widowed ☐ Divorced ☐

8. DATE OF BIRTH: April 21, 1955

9. AGE (In years last birthday): 18

IF UNDER 1 YEAR: Months / Days
IF UNDER 24 HRS.: Hours / Minutes

10a. USUAL OCCUPATION (Give kind of work done during most of working life, even if retired): Student

10b. KIND OF BUSINESS OR INDUSTRY: School

11. BIRTHPLACE (State or foreign country): Houston, Texas

12. CITIZEN OF WHAT COUNTRY?: USA

13. FATHER'S NAME: Billy Baulch, Sr.

14. MOTHER'S MAIDEN NAME: Maggie Jane Cox

15. WAS DECEASED EVER IN U.S. ARMED FORCES? (Yes, no, or unknown): No
(If yes, give war or dates of service):

16. SOCIAL SECURITY NO.:

17. INFORMANT:

MEDICAL CERTIFICATION

18. CAUSE OF DEATH [Enter only one cause per line for (a), (b), and (c).]
PART I. DEATH WAS CAUSED BY:
IMMEDIATE CAUSE (a): Asphyxia due to strangulation.
Conditions, if any, which gave rise to above cause (a), stating the underlying cause last.
DUE TO (b):
DUE TO (c):
INTERVAL BETWEEN ONSET AND DEATH:

PART II. OTHER SIGNIFICANT CONDITIONS CONTRIBUTING TO DEATH BUT NOT RELATED TO THE TERMINAL DISEASE CONDITION GIVEN IN PART I(a)

19. WAS AUTOPSY PERFORMED? YES ☒ NO ☐

20a. ACCIDENT ☐ SUICIDE ☐ HOMICIDE ☒

20b. DESCRIBE HOW INJURY OCCURRED. [Enter nature of injury in Part I or Part II of Item 18.]: Strangled.

20c. TIME OF INJURY: Hour UNK a.m. p.m. / Day found / Year 8 13 73

20d. INJURY OCCURRED: WHILE AT WORK ☐ NOT WHILE AT WORK ☒

20e. PLACE OF INJURY (e.g., in or about home, farm, factory, street, office building, etc.): (found) Chambers County

20f. CITY, TOWN, OR LOCATION: Chambers COUNTY: Texas STATE

21. I hereby certify that I attended the deceased from found to 19 and last saw the deceased alive on from autopsy findings 19 Death occurred at 8-13-73 m. on the date stated above, and to the best of my knowledge, from the causes stated.

22a. SIGNATURE (Degree or title): Joseph A. Jachimczyk, M.D.

22b. ADDRESS: 209 Courthouse Houston, Texas

22c. DATE SIGNED: 10-17-73

23a. BURIAL, CREMATION, REMOVAL (Specify): Burial

23b. DATE: October 12, 1973

23c. NAME OF CEMETERY OR CREMATORY: Woodlawn Garden of Memories

23d. LOCATION (City, town, or county): Houston (State): Texas

24. FUNERAL DIRECTOR'S SIGNATURE: HEIGHTS FUNERAL HOME

25a. REGISTRAR'S FILE NO.:

25b. DATE REC'D BY LOCAL REGISTRAR:

25c. REGISTRAR'S SIGNATURE:

VS-112. REV. 1/58

3418

994.7
E963

OFFENSE REPORT

PAGE NO. ONE — HOUSTON POLICE DEPARTMENT — SER. No. D-68936

LOCATION HIGH ISLAND, TEXAS (OUTSIDE)

M E
3413

OFFENSE MURDER — CHANGED TO

COMPLAINANT Billy Jean Baulch Jr — ADDRESS 439 W. 16th — PHONE 862-8344

SEX-RACE-AGE WM 17

REPORTED BY David Owen Brooks WM/18 — ADDRESS 1445 Peoh #6 — PHONE

TYPE PREMISES Beach

TIME OCCURRED UNKNOWN

TIME RECEIVED 4:50PM MONDAY, August 13, 1973 Det. JR Hamel — HOW In Person

HOW-MEANS	OBJECT	TRD. MK.	DESCR.	CLEARED	DATE

DISTRIBUTION	1 CASH	2 JEWELRY	3 BICYCLES	4 CLOTHING	5 MOTOR VEHICLE	6 MISCELLANEOUS	7 FURS	TOTAL
LOSS								
RECOVERY-DTL.								

(DETAILS OF OFFENSE-SUSPECTS-PERSONS ARRESTED-PROPERTY)

NOTE: THIS WILL BE A COMPANION CASE TO D-68904, which will contain all the details. Also other companion cases are murder cases D-68905 thrun D-68911. (and others)

INTRODUCTION:

The complainant in this case will be referred to as #27 in this investigation. Ranger Charlie Neal called back to the Homicide Office and stated that they had discovered another body in the same grave site as body #26 was found. This was approx. 1260 feet east of the body being shown as #25, and this is in Chambers County. The body was ordered removed to the Harris County Morgue and at this time is unknown. It appears to a white male and is badly decomposed.

NOTE: This body was found in the same grave site as body #26.

IDENTIFICATION OF COMPL. OCTOBER, 9,1973

Dr. Jachimeyzk called this date and stated that he had made identification of this body and that cause of death was by strangulation.

OFFICERS J.R. HAMEL D-532, J.D. TUCKER D-559 K. D. PORTER D-563

(DO NOT TYPE BELOW THE SOLID LINE OR LIST PROPERTY ACROSS THE DOTTED LINE.)

EDITED CHANGED INDEXED BULLETIN PUNCHED

STATE OF OHIO
HP-240
Rev. 8/70

DEPARTMENT OF HIGHWAY SAFETY

STATE HIGHWAY PATROL

DENTAL CHART

Fill out all information in PENCIL

#26 — Assigned identification number — Division Case Number

73-3413 — Autopsy number — Picture Pouch Number

Armed Forces Serial Number — Date of Exam.

Social Security Number — Place of Exam.

(Circle One) UNKNOWN PRESUMPTIVE BY EXCLUSION (CONFIRMED)

Name of the Deceased	Estimated Age	Race	Sex
Billy Bankes			

CONFIRMED IDENTIFICATION OF BODY BY _____
Name of Examiner

Confirmed identification by means of (circle) X-ray comparison, Clinical conformation by previous dental records, Other _____

X-rays taken (circle one) None, Complete Mouth, Bite Wings, Other _____

Photographs taken (circle one) None, Color, Black & White, Other _____

Name, Address, and Telephone Number of Photographer

Location of the Body _____

Position of the Body _____

BEFORE PROCEEDING—READ PAGE 2 CAREFULLY AND FOLLOW ALL INSTRUCTIONS—HAVE A QUALIFIED ASSISTANT TO DO ALL RECORDING
RECORD ALL INFORMATION IN PENCIL

Name, Address, and Telephone Number of the Examiner

Name, Address, and Telephone Number of the Assistant

Signature of the examiner

Signature of the Assistant

DENTAL CHARTING PROCEDURES

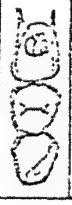
Tooth surfaces are recorded as follows——Mesidal—M, Distal—D, Buccal—F, Occlusal—O, and Lingual—L.

Indicate if crowned teeth are Porcelain, Plastic, Gold, Gold Veneer, or non-precious metal. Write in above appropriate tooth on restoration chart——Page 3. For Gold work or veneer crowns outline restoration and indicate gold with parallel vertical lines. For porcelain crowns or plastic fillings outline restorations only——write in the type of material. For all amalgam and non-precious metals black in. (SEE EXAMPLE BELOW)

This charting procedure starts with the upper right third molar which is tooth #1 and proceeds around the arch. The upper right central incisor is #8, the upper left third molar is #16. The lower left third molar is #17. The lower right central incisor is #25 and the lower right third molar is #32.

Mark all deciduous teeth with a D around the number of its permanent sucessor. The deciduous upper right central would be marked (8) and the lower right second deciduous molar would be marked (29).

EXAMPLE OF HOW TO PROCEED WITH DENTAL CHARTING

UPPER RIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	UPPER LEFT
																	

1. O—AM	5. MO—AM	9. PORC—CR	13. GOLD—CR
2. DOL—AM; F—AM	6. ML—GOLD FILL	10. F—PORC FILL; L—AM	14. MISSING
3. MOD GOLD FILL	7. 3/4 GOLD CR	11. MF—PORC FILL	15. MO—AM; L—AM
4. F—GOLD FILL; ML—AM	8. D—PORC FILL	12. PX—POSTHUMOUSLY MISSING	16. MODL—AM

After you have finished your examination have your assistant read the charting back to you as you recheck each tooth; then proceed to note any of the following conditions. Indicate answers with tooth number.

Mottled Enamel _____ Rotation _____

Fractured Enamel _____ Irregularity of Alignment _____

Enamel Hypoplasia _____ Unerupted Tooth _____

Fractures of Tooth _____ Unusual Restorations _____

Erosion _____ Malocclusion _____

Retained Dec. Teeth _____ Unusual Appliances _____

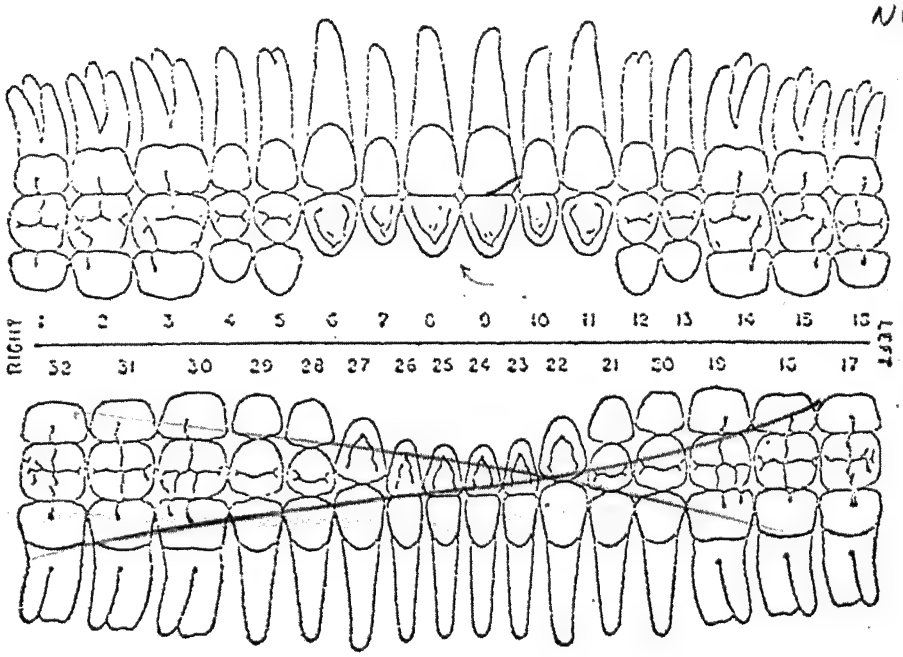
Abrasion _____ Supernumerary Tooth _____

Abnormal Interdental Spaces _____ Malposed Tooth _____

REMARKS _____

MARK ALL RESTORATIONS ON THIS CHART

NO FILLINGS



Circle descriptive term

Prosthetic Appliances Present —— Maxilla

Full Denture

Partial Denture

Fixed Bridge

Prosthetic Appliances Present —— Mandible

Full Denture

Partial Denture

Fixed Bridge

Describe completely all Prosthetic Appliances or Fixed Bridges NO MANDIBLE #9 CHIPPED ON DISTAL INCISAL

#9 MESIAL ROTATION - LAPS OVER MESIAL INCISAL OF #8

Stains on teeth

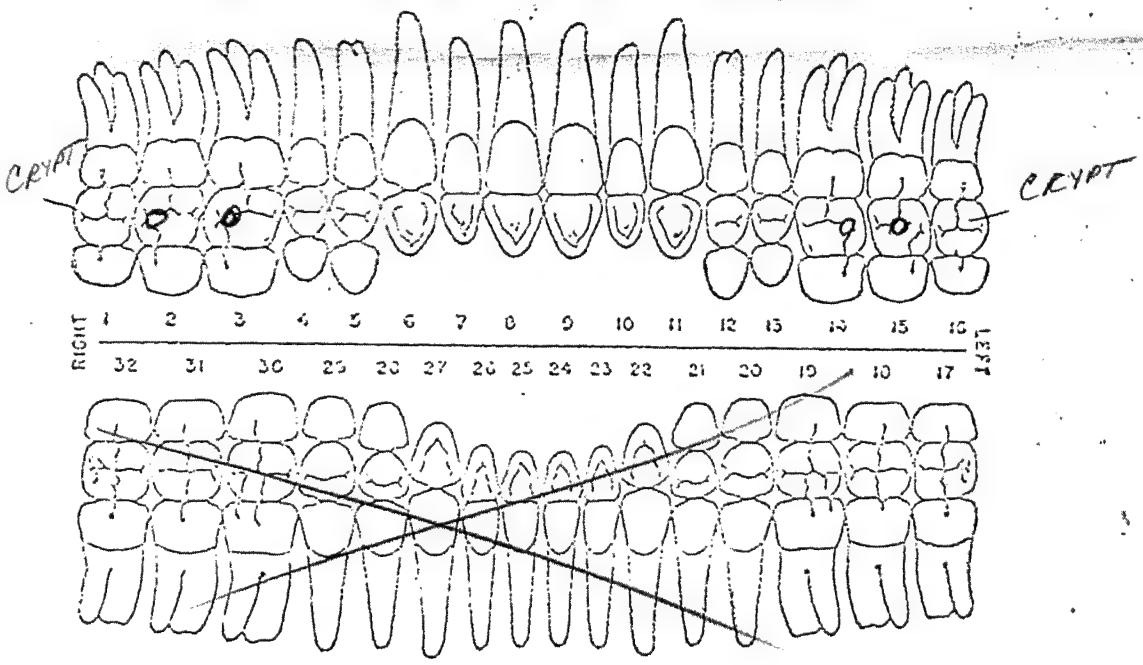
Slight

Moderate

Severe

MARK ALL CARIES AND MISSING TEETH ON THIS CHART

Outline all caries and 'X' out all missing teeth



Circle descriptive term

Jaw Relationship

Normal

Undershot

Overbite

Periodontal condition

Excellent

Average

Poor

Gross Neglect

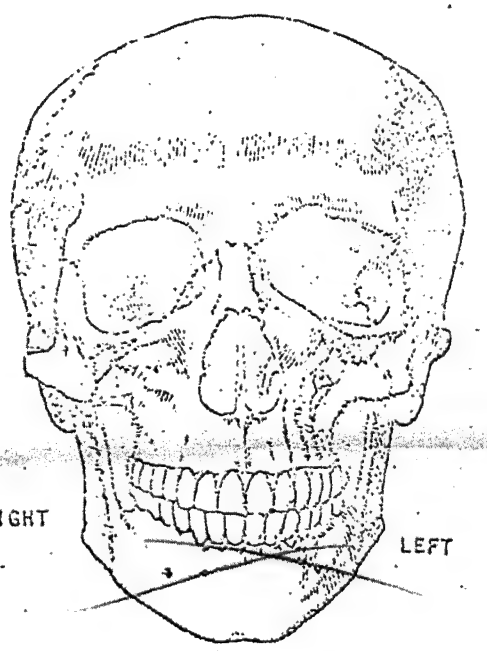
Calculus

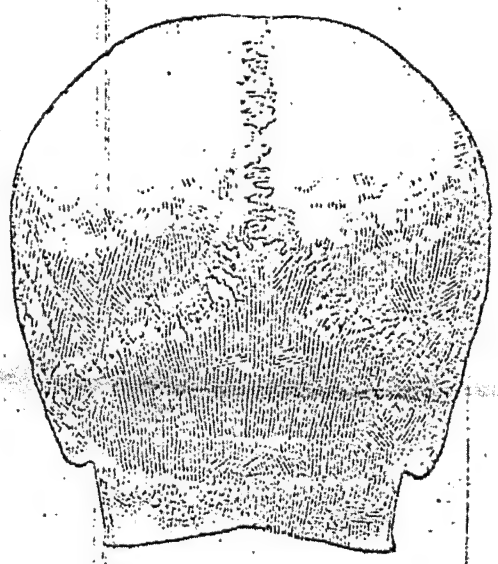
Slight

Moderate

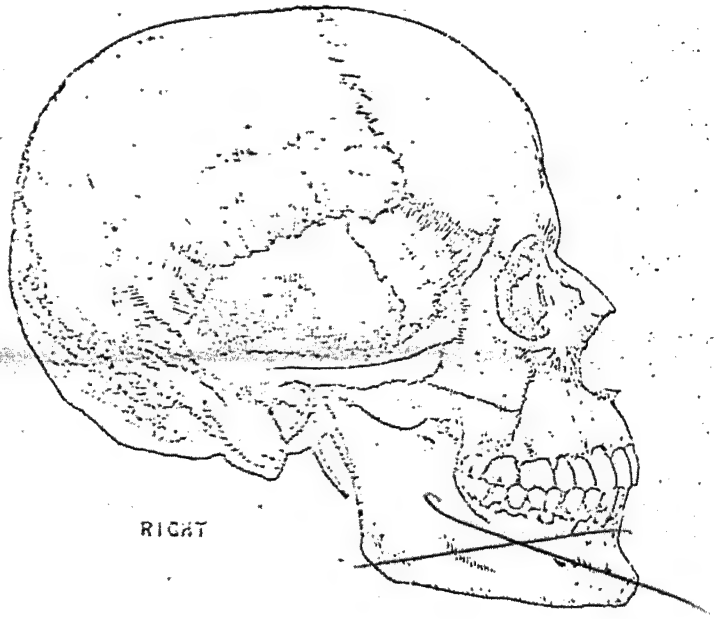
Severe

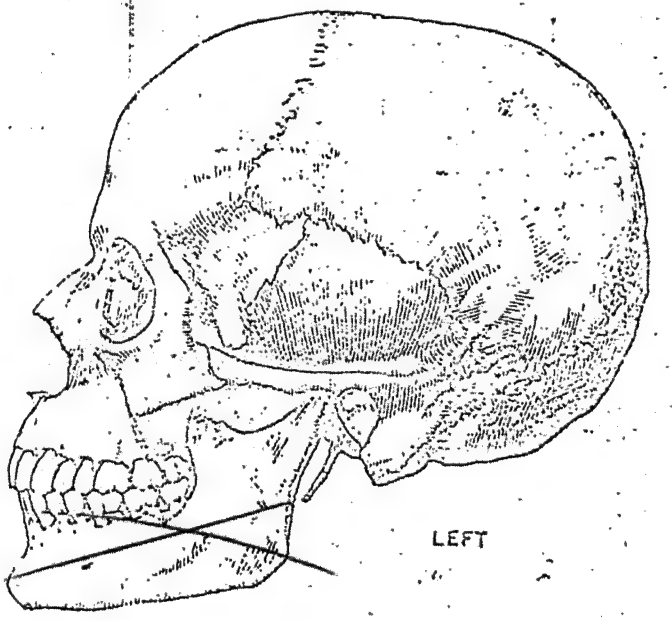
ANATOMICAL OUTLINES





ENTIRE SKULL AVAILABLE FOR EXAMINATION _____ YES, _____ NO.
IF ONLY PARTS OF THE SKULL ARE AVAILABLE BLACK OUT THE PARTS OF THE SKULL THAT YOU HAVE USED FOR THE IDENTIFICATION PROCEDURE. MARK IN ALL LINES OF FRACTURE.





MAKE SURE THAT ANY PARTS OF THE SKULL THAT YOU REMOVE HAVE ATTACHED TO THEM A TAG WITH THE ASSIGNED IDENTIFICATION NUMBER.

AFIP NUMBER 65-5348-1

Division Consultant: Dr. Curtis A. Hertz
P. O. Box 370
Ashtabula, Ohio 44004

DATE: _____ # 26 ML 73-3413

SEX: _____ SCARS: Skeleton

RACE: _____ TATTOOS: _____

EST. AGE: 21-23 OTHER: poss. spina bifida of one lumbar vertebra

HEIGHT: 5-3½ to 5-6 X-RAY: _____

WEIGHT: _____ CLOTHING: None

EYES: _____ PERSONAL EFFECTS: _____

HAIR: brown 6-7 inches

BODY CAN BE VIEWED: YES _____ NO _____

DECEDENT'S NAME: _____

DECEDENT'S ADDRESS: _____

NEXT OF KIN: _____

ADDRESS: _____

IDENTIFIED BY: _____ DATE: _____

ADDRESS: _____

HCME OFFICER PRESENT: _____

HARRIS COUNTY INSTITUTE OF FORENSIC SCIENCES
1885 OLD SPANISH TRAIL
HOUSTON, TEXAS 77054-2098

Sharon M. Derrick, Ph.D.
Forensic Anthropologist

ML73-3413

REPORT OF ANTHROPOLOGY CONSULTATION

DRAFT

CASE NUMBER: ML73-3413 (formerly IO11-00556)
NAME: Billy Gene Baulch, Jr.
PATHOLOGIST: Joseph A. Jachimczyk, MD, G. Sheldon Green, MD and Dwayne A. Wolf, MD, PhD
DATE (analyzed): March 11-14, 2011

On February 10, 2011, Dr. Wolf, Deputy Chief Medical Examiner, requested a skeletal profile and trauma analysis review of the skeletal remains of ML73-3413 (IO11-00556). The remains were exhumed from Woodlawn Cemetery, 1101 Antoine Drive, Houston, Texas under Order Number 2010-83010 from Harris County District Court 151. The exhumation was performed on February 8, 2011 to examine ML73-3333 and ML73-3413 for collection of anthropological and DNA data. See the original autopsy reports for ML73-3333 and ML73-3413 included in the current case files and the Case Background section below for detailed information on these cases. Two discrete body bags containing skeletal remains were recovered from within a single casket. The remains were immediately transferred to the HCIFS Morgue, received through the check-in process, and placed in the Anthropology Laboratory. Although the remains were believed to be those of ML73-3333 and ML73-3413, the cases were assigned inquest numbers (IO11-00555 and IO11-00556, respectively) at check-in.

As a result of the shallow water table geology of the Houston area, the two body bags were submerged in muddy water within the casket. The water had leaked through the zippers, resulting in waterlogged and softened skeletal elements. Further, mineral deposits had precipitated from the water to coat the majority of the bone surfaces. The elements of each set of remains were washed individually in cool water, reconstructed, ordered, and placed in anatomical position on an examination table to dry.

IO11-00555 and IO11-00556 were assessed for the minimum number of individuals present and for evidence of possible commingling of the decedents placed in the casket in 1973. The remains were also compared with photographs and inventory documentation from the ML73-3333 and ML73-3413 case files. IO11-00555 represents the nearly complete skeletal remains of one individual and is consistent with the archived photo and record documentation of ML73-3333. IO11-00556 is comprised of a minimum of two commingled individuals (see Inventory below), but is consistent with the archived photo and record documentation of ML73-3413. Therefore, IO11-00555 is reassigned case number ML73-3333 and IO11-00556 is reassigned case number ML73-3413.

ML73-3413 was examined grossly and with a stereomicroscope when appropriate, measured and photographed. Elements representing a second individual were removed and submitted to the University of North Texas Center for Human Identification (UNT) for DNA analysis (see Inventory below). Following the examination, ML73-3413 was placed in a box labeled with the case number and returned to the HCIFS Morgue refrigeration unit.

Case Background

ML73-3333 and ML73-3413 are two of 27 companion cases recovered from three locations during a serial murder investigation in August 1973. The partially fleshed, articulated remains of ML73-3333 were recovered on August 8, 1973 from the dirt floor of a storage facility in southwest Houston. The disarticulated skeletal remains of ML73-3413 were recovered from a burial site on a beach in Chambers County on August 13, 1973.

ML73-3333 and ML73-3413 were identified through circumstantial evidence on October 9, 1973 as brothers Michael Anthony Baulch and Billy Gene Baulch, Jr. (see Identification section below). The remains were released to the funeral home on October 10. The family chose to place the decedents within the same casket for burial in the Woodlawn Cemetery.

ML73-3333 was misidentified as Michael Baulch in 1973. The misidentification was discovered in 2010 during the ongoing Forensic Anthropology Division review of unidentified decedent cases. ML73-3378, a companion case recovered from a Lake Sam Rayburn beach on August 9, 1973 was subsequently identified as Michael Baulch

by DNA comparison. See Identification below. The identity of ML73-3333 is unknown at this time (see Anthropology Report ML73-3333).

Inventory

The remains of ML73-3413 represent a minimum of two individuals. The first individual, identified as Billy Baulch, is represented by approximately 60% of the skeleton. The following elements are absent.

Mandible
Right ribs 1-2 and 11-12
Left ribs 8 and 10-12
Manubrium, corpus sterni, and xiphoid process
Cervical vertebra 3
Three mid-range cervical vertebrae
Nine mid-range through lower range thoracic vertebrae
Lumbar vertebrae 2-5
Sacrum
Right innominate
Right patella
Left patella
Right carpals (7), right hamate is present
Right metacarpals 1-5
All phalanges of the right hand
Left ulnar epiphysis
Left carpals (8)
Left metacarpals 1-5
All phalanges of the left hand
Right tarsals (7)
Right metatarsals 1-5
All phalanges of the right foot
Left tarsals (7)
Left metatarsals 1-4
Left metatarsal 5, retained in 1973 and submitted for DNA analysis in 2006)
All phalanges of the left foot

The following elements are inconsistent in size, general morphology, and/or age with the majority of the remains. These elements, representing a minimum of one

individual, were examined and photographed prior to removal for DNA analysis. A case number(s) will be assigned to the remains after receipt of DNA results.

- Right innominate: the right innominate is more robust than the left, and the size of the acetabulum is not a good fit for the right femoral head. The left innominate and left femur articulate well. DNA analysis of the left innominate indicates that the left innominate likely belongs to Billy Baulch (see Identification section below).
- One mid-range thoracic vertebra, one upper range lumbar vertebra, and one mid-range lumbar vertebra. The rims of the centra are more developed than those of the other vertebrae, and may represent an older individual. The lumbar vertebrae centra also contain Schmorl's nodes, inconsistent with the healthy centrum faces of the other vertebrae. DNA analysis indicates the more youthful vertebrae belong to Billy Baulch (see Identification section below).
- One right second or third rib. The rib is noticeably more robust than the upper range ribs of the left side.

Skeletal Profile

The following profile was obtained from the remains determined by comparison of morphology, growth, and development to belong to the same individual and to represent the majority of ML73-3413. The results are consistent with the missing person description of Billy Gene Baulch, Jr. (17 years old at disappearance on 5/21/1972, DOB: 04/21/1955, White male, estimated 5'9" tall) obtained from the original autopsy report supplement, dated October 8-9, 1973, in which ML73-3413 was identified as Billy Gene Baulch, Jr.

- Age: 16-19 years
- Ancestry: White, with possible Native American admixture
- Sex: Male
- Stature: 62.0"-68.6" (5'3" - 5'9")

Age

The decedent is an adolescent of an estimated 16-19 years based on epiphyseal fusion, age-related morphology of the sternal end of the fourth rib and the pubic symphysis, dental development, and general skeletal size.

The remains are large enough in general size to represent an adult individual. However, the pattern of epiphyseal fusion is consistent with an adolescent that has not

yet attained full adult skeletal growth and development. The following epiphyses are in a stage of partial union. The age range estimates for fusion follow Scheuer and Black.

- Basilar suture (range 13–18 years)
- Posterior atlas, likely an anomaly, fuses at approximately 4–5 years
- Rib heads (range 17–25 years)
- Thoracic vertebral rims (range puberty to early 20s)
- Lumbar vertebral rim (range puberty to early 20s)
- Ischial tuberosity (<20 years)
- Iliac crest (17–20 years)
- Head of humerus (16–20 years)
- Medial epicondyle of humerus (14–16 years)
- Distal radius (16–20 years)
- Distal ulna (17–20 years)
- Head of femur (15–19 years)
- Distal femur (16–20 years)
- Proximal tibia (15–19 years)

The age-related morphology of the left fourth rib is consistent with Phases 0–1a (male) of the Iscan model, corresponding to an age range of <17–19 years. In cross-section the rib end is smooth and minimally convex, with no development of the rim observed. Age-related morphology of the left pubic symphysis face corresponds to male Phase I–1 of the Suchey-Brooks method, with a range of 15–23 and a mean of 18.5 years of age. The symphyseal face is somewhat eroded as a result of taphonomic processes but there is clear absence of upper and lower delimitation accompanied by the presence of marked ridges and furrows.

The dentition is consistent with that of an adolescent. The maxillary third molars, teeth 1 and 16, are in an early stage of eruption. The roots have developed to approximately ¾ of the full length and are open at the apices. Although development and eruption of the third molars is variable, this stage has been described by Smith as consistent with a mean age of 16.4 years. The dentition is described more fully under the Dentition section below.

Ancestry

ML73-3413 is estimated as White with possible Native American admixture based on metric and morphological analyses. Cranial and postcranial measurements for ML73-3413 were entered into FORDISC 3.1, a multidiscriminant function software program.

FORDISC 3.1 compared the measurements with those compiled in the Forensic Database and provided the following classification results:

- White male, based on 39 postcranial measurements compared with males and females in the Forensic Database (posterior probability=0.998, typicality probability=0.657, and a low typicality Chi=0.040).
- White male, based on stepwise comparison of 5 postcranial measurements also compared with both males and females (posterior probability=0.478, typicality probability=0.450, typicality Chi=0.414). The decedent is an adolescent. Comparison with only male measurements results in an inconclusive classification.
- White male, based on 17 cranial measurements compared with all individuals in the Forensic Database (posterior probability = 0.774, typicality probability = 0.345, typicality Chi=0.265).
- White male, based on stepwise comparison of 11 cranial measurements with males only (posterior probability=0.645, typicality probability=0.677, typicality Chi=0.645).

The morphological method of ancestry estimation for ML73-3413 follows the Gill and Rhine model. Characteristics of the cranium associated with White populations observed in the decedent include: small retreating zygomatics, a sharp protruding nasal sill, a narrow nasal aperture, high arched nasal bones, and little alveolar prognathism. Characteristics of the cranium associated with Native American populations observed include: a low sloping skull shape, rounded and high skull height, broad and flat facial shape, square eye orbits, angled zygomaxillary sutures, a markedly elliptic palate shape, straight palatal suture, and a lack of crowding in the dentition. The femur curvature is uninformative for ancestry because it differs between the left femur (arched) and the right femur (little arching).

In addition to the Gill and Rhine skeletal morphology model, non-metric traits of the maxillary dentition are supportive of White ancestry/Native American admixture. The Carabelli's cusp trait is frequently expressed in males of European descent while the shovel shaped incisor trait is infrequently expressed. Conversely, the shovel shaped incisor trait is frequently expressed in populations of Asian descent, such as Native Americans. The Carabelli's cusp trait is infrequently expressed in these populations. Research on the genetic basis for expression of these traits is published in the current dental and anthropological literature. Both traits are observed in the maxillary

dentition of ML73-3413, suggesting a possible combination of White and Asian/Native American ancestry. See the Dentition section below for further description.

Sex

The decedent is estimated as male based on results from the FORDISC 3.1 cranial and postcranial analyses described under Ancestry, the diameter of the humeral and femoral heads, the morphology of the cranium using the Buikstra and Ubelaker model, and the structure of the pelvis following the Phenice model.

The male characteristic of marked extension of the zygomatic arch past the external auditory meatus is observed in the cranium. The majority of the cranial characteristics are either indeterminate or female in expression, likely due to the young developmental age of the decedent. Male characteristics observed in the postcranial skeleton include features of the pelvis (a narrow sciatic notch, absence of a ventral arc, subpubic convexity, absence of ischiopubic concavity, short pubic length, and a flat sacral attachment), humeral head diameters greater than 47.2 mm and femoral head diameters of 47 mm and 48 mm.

Stature

Living stature is estimated using FORDISC 3.1 comparison of postcranial measurements from the decedent with those of White males compiled in the Forensic Database. FORDISC 3.1 calculates an estimated stature range of 62.0"-68.6" (5'2"-5'9").

Trauma

Antemortem:

An investigator supplement to the ML73-3413 autopsy report notes that "An X-ray of Billy Baulch's left elbow...revealing a fracture which occurred in 1966" was turned over to H.C. Gregory of the Harris County Morgue. This radiograph is not available for review. No fracture scars are observed on the distal left humerus or the proximal left radius and ulna. Instead, a very subtle well-healed fracture scar is observed on the distal left radius. Due to the fact that the elbow injury occurred approximately five years prior to death and the decedent was 11 years old at the time, it is possible that the fracture line is no longer visible.

Perimortem:

No perimortem injury is described in the ML73-3413 autopsy report. Due to taphonomic processes of burial and periodic submersion in water for 38 years,

perimortem injury to the skeleton cannot be reliably distinguished from postmortem damage.

Postmortem:
The maxillary dental arch was removed with an autopsy saw for identification purposes at the original examination. Crumbling of the fragile nasal bones, ethmoid, and vomer is observed. A small round defect in the superior right scapular blade is consistent with puncture of the delicate blade in an anatomically anterior to posterior direction. The elements are coated with residual quick-lime (noted at autopsy) as well as the precipitated mineral sheets described above. The cortical surfaces of the morphological features are somewhat eroded. A complete transverse fracture of left rib 9 occurred during cleaning of the elements for examination.

Pathology and Individualizing Characteristics
No pathological conditions are observed. The following individualizing characteristics are present: retained metopic suture of the frontal bone and incomplete fusion of the first cervical vertebra posterior rim.

Dentition
The mandible was not recovered in 1973 and is absent at this examination. All maxillary teeth were present in the dental arcade at recovery in 1973. Teeth 8-12 are absent postmortem at this examination but are documented in the original autopsy report and photographs. The dentition is relatively healthy and no reconstructions are observed. A Carabelli's cusp (accessory cusp that may develop on the mesiolingual cusp of the maxillary first molar) is observed on teeth 3 and 14. Tooth 7 is shovel-shaped (presence of lingual marginal ridges resulting in a concave lingual surface).

Dr. Paul G. Stimson notes caries on teeth 2-3 and 14-15 during his examination of the maxillary dentition in 1973. These caries are observed as pits within the grooves around the occlusal cusps. Dr. Stimson also notes chipping and excessive wear on tooth 9 but tooth 9 is now absent. See Dental Examination on page 4 of the ML73-3413 autopsy report.

Postmortem Interval
At the time of original skeletal recovery from a shallow sandy beach grave in August 1973, Billy Baulch had been missing since May 21, 1972 (14 months). The remains were coated with lime and wrapped in heavy plastic. The condition of the remains at recovery was described in the ML73-3413 autopsy report as, "skeletal remains...with

the flesh nearly completely deteriorated away." Photographs depict disarticulated elements, fully exposed bone, and minimal amounts of adherent tissue. Given the circumstances of deposition, the decomposition stage is consistent with a postmortem interval of one to two years.

Identification

ML73-3413 was identified in 1973 as Billy Gene Baulch, Jr. based on the following evidence.

- Recognition of the head hair by parents, Mr. and Mrs. Billy Gene Baulch, Sr.
- Recognition of the anterior teeth by Mr. and Mrs. Baulch, particularly the "pointed canines" and a chip in the occlusal surface of tooth 9.
- Review of an antemortem photo of Billy Baulch that shows the anterior teeth in comparison with the maxillary dental arcade of ML73-3413 and also with Dr. Paul Stimson's (forensic odontologist) dental chart and description
- Review of a radiograph of Billy Baulch's left elbow (no results documented)

DNA sampling and profile comparison were completed as a part of the current examination. Buccal swabs were obtained from Debra Baulch Hernandez, sister of Billy and Michael Baulch. The DNA profile obtained from the swabs was compared with both mitochondrial and nuclear DNA profiles obtained from the left innominate, one upper range lumbar vertebra, and the left fifth metatarsal of the ML73-3413 remains, and the cranium and ribs of ML73-3378. The following statistical conclusions were reported by UNT.

- It is 820 million times more likely that ML73-3413 is a sibling of Debra Sue Baulch Hernandez than if the decedent is unrelated to her.
- It is 10,000 times more likely that ML73-3378 (identified as Michael Baulch) is another biological sibling of Debra Sue Baulch Hernandez than if the decedent is unrelated to her.
- It is at least 379 times more likely that ML73-3413 and ML73-3378 are related as siblings than if they are unrelated.

The DNA profile comparisons are consistent with identification of ML73-3413 and ML73-3378 as Billy and Michael Baulch, respectively. ML73-3413 is identified as Billy and ML73-3378 is identified as Michael due to consistencies in disappearance dates and decomposition stages. Billy disappeared 14 months prior to the recovery of ML73-3413. The decomposition stage at recovery described above is consistent with that

postmortem interval. Michael disappeared on July 17, 1973, only three weeks prior to the recovery of ML73-3378 in an articulated and fleshed state.

Summary

The skeletal remains of ML73-3413 are estimated to represent a White male, 16-19 years of age and 5'2"-5'9" inches tall. ML73-3413 is identified as Billy Gene Baulch, Jr. through DNA profile comparison, development of a consistent biological profile, decomposition stage at recovery, and circumstantial evidence. The remains of Billy Baulch are commingled with skeletal elements representing a minimum of one additional individual. These elements have been examined and submitted to UNT for DNA analysis. With the exception of the commingling and observation of a well-healed fracture scar on the distal left ulna, the anthropological findings are consistent with the autopsy findings in the report filed on August 14, 1973. No perimortem skeletal trauma or pathological conditions are observed.

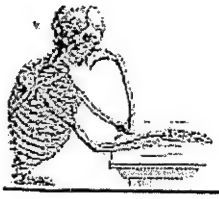
DRAFT

Sharon M. Derrick, Ph.D. MMDDYY
Forensic Anthropologist

Reviewed by:

DRAFT

Jennifer C. Love, Ph.D., D-ABFA MMDDYY
Forensic Anthropology Director



Harris County Institute of Forensic Sciences
Forensic Anthropology Division
Data Sheets

(2011-(S)-556)

Case # MC73-3413 Anthropologist S. Derrick
Date/Hour of Examination 3/11/2011 - 3/14/2011
Pathologist Jachimczyk County Harris

Scene Description
Exhumation from buried casket. Ground water seepage
Woodlawn Cemetery, 2/8/2011, Order# 2010-83018

Condition of Remains
Friable, muddy, mineral deposits, very wet, soft

Processing Procedure
Elements were handwashed in cool water and air-dried on trays.

Personal Property
None

Positively Identified (by) HCIFS/UNT DNA results (technique) DNA (mito & nuclear)
Decedent Name Billy Gene Baulch, Jr., WM17, 5'9", 145lbs (description)

Unidentified Checklist:

Dental Chart
- ✓ Anthropologist
- ✓ Odontologist
- __ Edentulous

Radiographs N/A, Identified Case
- __ Articulated
- __ Disarticulate
- ✓ Dental → previously done by Dr. Stimson no electronic copies available

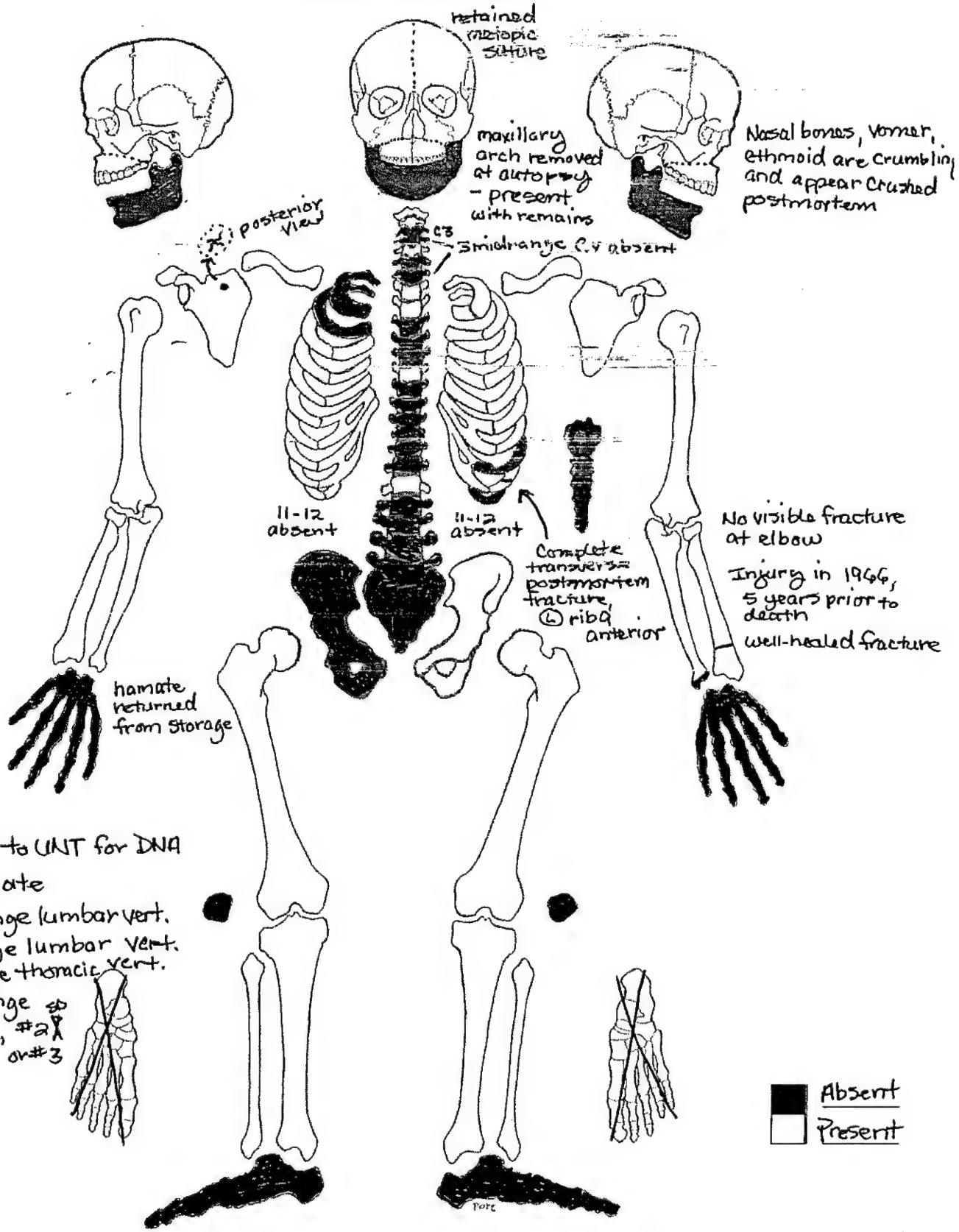
DNA identified
- ✓ UNT
- __ HCME Lab Archives

Photographs
- ✓ Skeletal Overview
- ✓ Biological Profile
- ✓ Reconstruction
- ✓ Trauma
- N/A Radiographs Identified

Dissemination N/A, Identified case
- __ Law Enforcement
- __ Media
- __ NCMEC #
- __ NCIC #
- __ NamUs #

Update Databases ~~N/A~~ SO
- ✓ Justice Tracks
- ✓ Anthropology Logbook

Harris County Medical Examiner's Office
Forensic Anthropology Division
Skeleton – Anterior View



*Submitted to UNT for DNA
R. innominate
1 upper range lumbar vert.
1 mid-range lumbar vert.
1 mid-range thoracic vert.
1 upper range ⓡ rib, #2 or #3

ID11-00556 converted to
Case Number ML73-3413
Analyst S. Dennick
Date 2/10/2011

Harris County Institute of Forensic Sciences
Forensic Anthropology Division
Fordisc Measurements

Used left side measurements in FORDIC when possible

CRANIAL MEASUREMENTS (Pages 52-60)

			Left	Right
1. MAXIMUM LENGTH (g-op):	185	13. NASAL HEIGHT (n-ns):	48*	
2. MAXIMUM BREADTH (eu-eu):	135	14. NASAL BREADTH (al-al):	23*	
3. BIZYGOMATIC BREADTH (zy-zy):	132	15. ORBITAL BREADTH (d-ec):	44	___
4. BASION-BREGMA (ba-b):	137	16. ORBITAL HEIGHT (OBH):	30	___
5. CRANIAL BASE LENGTH (ba-n):	103	17. BIORBITAL BR. (ec-ec):	97	
6. BASION-PROSTHION L. (ba-pr):	99*	18. INTERORBITAL BR. (d-d):	21	
7. MAX.-ALVEOLAR BR. (ecm-ecm):	62*	19. FRONTAL CHORD (n-b):	107	
8. MAX.-ALVEOLAR L. (pr-alv):	54*	20. PARIETAL CHORD (b-l):	121	___
9. BIAURICULAR BREADTH (ALB):	119	21. OCCIPITAL CHORD (l-o):	94	
10. UPPER FACIAL HGT. (n-pr):	63*	22. FORAMEN MAGNUM L. (ba-o):	36	
11. MIN. FRONTAL BR. (ft-ft):	97	23. FORAMEN MAGNUM BR (FOB):	33	
12. UPPER FACIAL BR. (fmt-fmt):	104	24. MASTOID LENGTH (MDH):	30	30

MANDIBULAR MEASUREMENTS (Pages 61-63)

No mandible

	Left	Right		Left	Right
25. CHIN HEIGHT (gn-id):	___		30. MIN. RAMUS BREADTH:	___	___
26. BODY HEIGHT at MENTAL FOR:	___	___	31. MAX. RAMUS BREADTH:	___	___
27. BODY THICKNESS at M. FOR:	___	___	32. MAX. RAMUS HEIGHT:*	___	
28. BIGONIAL DIAMETER (go-go):	___		33. MAND. LENGTH:*	___	
29. BICONDYLAR BR. (cdl-cdl):	___		34. MAND. ANGLE:*	___	

* Record only if mandibulometer is used.

POSTCRANIAL MEASUREMENTS (Pages 64-76)

CLAVICLE: Epiph. P/A:	Left	Right
35. MAXIMUM LENGTH:	146	151
36. SAGITTAL DIAM. at MIDSH:	15	14
37. VERTICAL DIAM. at MIDSH:	10	10

SCAPULA: Epiph. P/A:	Left	Right
38. HEIGHT:	146	148
39. BREADTH:	101	102

HUMERUS: Epiph. P/A:	Left	Right
40. MAXIMUM LENGTH:	313	315
41. EPICONDYLAR BREADTH:	61	62
42. MAX. VERT. DIAM. of HEAD:	48	48
43. MAX. DIAM. at MIDSHAFT:	24	24
44. MIN. DIAM. at MIDSHAFT:	18	19

RADIUS: Epiph. P/A:	Left	Right
45. MAXIMUM LENGTH:	243	open epiph
46. SAGITTAL DIAM. at MIDSH:	12	12
47. TRANSV. DIAM. at MIDSH:	16	16

ULNA: Epiph. P/A:	Left	Right
48. MAXIMUM LENGTH:	no epiphy.	261
49. DORSO-VOLAR DIAMETER:	16	16
50. TRANSVERSE DIAMETER:	15	15
51. PHYSIOLOGICAL LENGTH:	no epiphy.	240
52. MIN. CIRCUMFERENCE:	40	40

SACRUM: No. Segments: Absent
53. ANTERIOR HEIGHT: ___
54. ANTERIOR SURFACE BREADTH: ___
55. MAX. BREADTH (S-1) ___

INNOMINATE: Epiph. P/A:	Left	Right
56. HEIGHT:	207	209
57. ILIAC BREADTH:	154	156
58. PUBIS LENGTH:	79	85
59. ISCHIUM LENGTH:	78	79

(not likely to belong to case)

FEMUR: Epiph. P/A:	Left	Right
60. MAXIMUM LENGTH:	431	434
61. BICONDYLAR LENGTH:	429	429
62. EPICONDYLAR BREADTH:	81	80
63. MAX. DIAM. of HEAD:	47	48
64. A-P SUBTROCH. DIAMETER:	29	29
65. TRANSV. SUBTROCH. DIAM:	32	32
66. A-P DIAM. MIDSH:	26	26
67. TRANVS. DIAM. MIDSH:	28	29
68. CIRCUMFERENCE AT MIDSH:	90	90

TIBIA: Epiph. P/A:	Left	Right
69. CONDYLO-MALLEOLAR LEN:	366	367
70. MAX. PROX. EPIPH. BR:	77	77
71. MAX. DIST. EPIPH. BR:	52	52
72. MAX. DIAM. NUTRIENT FOR:	38	38
73. TRANSV. DIAM. NUTR. FOR:	24	24
74. CIRCUM. AT NUTR. FOR:	100	100

FIBULA: Epiph. P/A:	Left	Right
75. MAXIMUM LENGTH:	360	363
76. MAX. DIAM. at MIDSHAFT:	17	18

CALCANEUS: Epiph. P/A: Absent

	Left	Right
77. MAXIMUM LENGTH:		
78. MIDDLE BREADTH:		

Case Number: ML13-3413
Analyst: S. Derrick
Date: 3/11/2011

* = reconstructed

DF results using 39 variables:

CLAAPD	CLAVRD	CLAXLN	FEMBLN	FEMCIR	FEMEBR
FEMHDD	FEMMAP	FEMMTV	FEMSAP	FEMSTV	FEMXLN
FIBMDM	FIBXLN	HUMEBR	HUMHDD	HUMMWD	HUMMXD
HUMXLN	ILIABR	INNOHT	ISCHLN	PUBCLN	RADAPD
RADTVD	RADXLN	SCAPBR	SCAPHT	TIBCIR	TIBDEB
TIBNFT	TIBNFX	TIBPEB	TIBXLN	ULNCIR	ULNDVD
ULNPHL	ULNTVD	ULNXLN			

From Group	Total Number	Into Group BF	BM	WF	WM	Percent Correct
BF	18	14	1	3	0	77.8 %
BM	35	0	32	0	3	91.4 %
WF	55	4	0	50	1	90.9 %
WM	102	3	6	0	93	91.2 %

Total Correct: 189 out of 210 (90.0 %) *** CROSSVALIDATED ***

Multigroup Classification of Current Case

Group	Classified into	Distance from	Probabilities Posterior	Typ F	Typ Chi	Typ R
WM	**WM**	55.7	0.998	0.657	0.040	0.304 (71/103)
BM		68.2	0.002	-----	0.003	0.057 (33/36)
BF		73.0	0.000	-----	0.001	0.053 (18/19)
WF		78.7	0.000	0.913	0.000	0.018 (56/56)

Current Case is closest to WMs

	Current Case	Chk	Group Means BF 18	BM 35	WF 55	WM 102
CLAAPD	15	+	11.1	13.8	10.4	12.8
CLAVRD	10		9.7	11.1	9.3	11.3
CLAXLN	146		140.8	159.5	139.0	156.8
FEMBLN	429	-	434.4	479.9	431.1	469.2
FEMCIR	90		80.5	93.1	82.0	92.2
FEMEBR	81		72.4	83.2	75.7	85.0
FEMHDD	47		40.8	47.2	42.3	48.4
FEMMAP	26	-	27.2	31.5	27.4	30.9
FEMMTV	28		23.8	28.0	24.3	27.8
FEMSAP	29	+	25.1	28.7	25.9	28.7
FEMSTV	32		28.3	32.1	29.2	32.1
FEMXLN	431	-	438.9	483.6	435.2	472.5
FIBMDM	17	+	13.8	15.3	14.5	15.8
FIBXLN	360		357.3	395.7	350.8	385.7
HUMEBR	61		54.4	64.2	55.9	64.5
HUMHDD	48		40.3	46.7	42.8	48.6
HUMMWD	18		15.9	19.3	15.5	18.8
HUMMXD	24	+	20.2	23.7	20.0	23.3
HUMXLN	313		304.8	340.4	304.1	335.5
ILIABR	154		142.1	153.6	155.6	160.2
INNOHT	207		189.3	211.0	202.4	223.0
ISCHLN	78		77.5	88.9	81.8	91.0
PUBCLN	79		75.0	76.0	85.3	82.7
RADAPD	12		11.4	13.0	10.4	12.9
RADTVD	16		13.3	16.0	13.7	16.6
RADXLN	243		235.2	266.9	227.8	252.9
SCAPBR	101		94.1	111.1	95.8	108.0
SCAPHT	146		137.1	160.8	141.9	163.0
TIBCIR	100		86.4	100.5	85.9	97.8
TIBDEB	52		45.4	51.8	46.5	52.2
TIBNFT	24		22.9	26.6	22.1	25.5

MC74-3413
J. Derrick

TIBNFX	38	+	31.3	36.7	32.0	36.5
TIBPEB	77		68.3	78.3	69.8	78.9
TIBXLN	366		363.7	403.4	356.9	391.6
ULNCIR	40	+	32.4	37.4	34.0	37.9
ULNDVD	16	+	12.6	15.7	12.0	15.4
ULNPHL	240		224.2	253.8	216.8	239.8
ULNTVD	15		13.4	15.9	13.3	16.3
ULNXLN	261		252.2	285.0	244.3	271.1

Natural Log of Determinant = 79.9389

MC73-3413
S. Derrick

DF results using 5 Forward % selected (min: 1 max: 20, out of 39) variables:
INNOHT RADXLN TIBPEB ILIABR SCAPHT

From Group	Total Number	Into Group BF	BM	WF	WM	Percent Correct
BF	18	16	0	1	1	88.9 %
BM	35	1	33	0	1	94.3 %
WF	55	4	0	51	0	92.7 %
WM	102	3	10	3	86	84.3 %

Total Correct: 186 out of 210 (88.6 %) *** CROSSVALIDATED ***

Multigroup Classification of Current Case

Group	Classified into	Distance from	Probabilities Posterior	Typ F	Typ Chi	Typ R
WM	**WM**	5.0	0.478	0.450	0.414	0.451 (56/103)
BF		6.4	0.238	0.494	0.269	0.056 (17/19)
BM		7.1	0.170	0.327	0.215	0.257 (26/36)
WF		7.9	0.114	0.228	0.163	0.036 (53/56)

Current Case is closest to WMs

Current Case	Chk	Group Means BF 18	BM 35	WF 55	WM 102
INNOHT	207	189.3	211.0	202.4	223.0
RADXLN	243	235.2	266.9	227.8	252.9
TIBPEB	77	68.3	78.3	69.8	78.9
ILIABR	154	142.1	153.6	155.6	160.2
SCAPHT	146	137.1	160.8	141.9	163.0

Natural Log of Determinant = 19.3565

mc73-3413
S. Derrick

Cranial m+F

P.7 of 14

FORDISC 3.1 Analysis of Current Case **3/17/2011 9:55:06 AM**

DF results using 17 variables:
AUB BBH BNL BPL FRC GOL MAB NLB NLH OBB
OBH OCC PAC UFHT WFB XCB ZYB
Variables removed: UFBR MDH MAL DKB EKB FOL FOB

From Group	Total Number	AF	AM	BF	BM	CHM	GTM	HF	HM	JF	JM	VM	WF	WM	Percent Correct
		Into Group													
AF	29	11	7	1	0	1	2	3	1	0	0	[illegible]	2	0	37.9 %
AM	51	3	33	0	1	4	2	1	1	1	2	2	0	1	64.7 %
BF	70	2	0	38	4	0	4	8	3	3	0	1	6	1	54.3 %
BM	95	4	1	9	52	6	1	2	6	3	4	2	0	5	54.7 %
CHM	69	4	0	0	8	33	3	1	2	1	11	5	0	1	47.8 %
GTM	68	7	3	3	2	0	41	5	2	0	2	2	1	0	60.3 %
HF	42	1	0	3	0	1	5	22	0	2	1	3	4	0	52.4 %
HM	166	13	7	2	16	15	25	15	30	1	17	9	2	14	18.1 %
JF	118	0	0	4	0	2	0	0	0	112	0	0	0	0	94.9 %
JM	168	5	10	0	4	21	10	8	6	2	82	14	2	4	48.8 %
VM	48	0	0	0	0	4	3	6	0	2	4	29	0	0	60.4 %
WF	160	1	0	7	0	1	0	8	1	0	2	3	122	15	76.3 %
WM	261	6	2	1	8	5	0	3	1	0	14	2	19	200	76.6 %

Total Correct: 805 out of 1345 (59.9 %) *** CROSSVALIDATED ***

Multigroup Classification of Current Case

Group	Classified into	Distance from	Probabilities Posterior	Typ F	Typ Chi	Typ R	
WM	**WM**	20.2	0.774	0.345	0.265	0.406	(155/262)
WF		24.5	0.090	0.209	0.107	0.131	(139/161)
BM		25.7	0.049	0.255	0.080	0.147	(81/96)
AM		27.2	0.023	0.419	0.055	0.176	(42/52)
AF		27.3	0.022	0.785	0.054	0.069	(27/30)
CHM		28.3	0.013	0.257	**0.041**	**0.029**	**(67/70)**
HM		28.7	0.011	0.097	**0.038**	0.096	(150/167)
JM		29.3	0.008	0.085	**0.032**	**0.012**	**(166/169)**
JF		29.7	0.007	0.111	**0.029**	**0.008**	**(119/119)**
BF		31.9	0.002	0.163	**0.015**	**0.014**	**(70/71)**
HF		33.5	0.001	0.349	**0.010**	**0.023**	**(43/43)**
GTM		36.4	0.000	0.097	**0.004**	**0.014**	**(69/69)**
VM		37.9	0.000	0.184	**0.003**	**0.020**	**(49/49)**

Current Case is closest to WMs

Current Case		Chk	AF 29	AM 51	BF 70	BM 95	CHM 69	GTM 68	HF 42	HM 166	JF 118	JM 168	VM 48	WF 160	WM 261
			Group Means												
AUB	119		125.6	132.1	115.6	120.7	123.9	123.7	119.0	124.1	112.[illegible]	125.7	[illegible]2.8	11[illegible]	[illegible].2
BBH	137		129.6	133.4	131.2	137.3	139.7	133.2	131.7	136.5	132.[illegible]	138.8	[illegible]7.8	13[illegible]	14[illegible]9

MC73-3913 S. Darnick

BNL	103		99.9	103.0	98.3	104.4	100.3	98.5	95.6	100.8	95.2	101.5	97.6	99.2	106.3
BPL	99		96.7	100.1	98.8	104.4	97.1	97.9	93.0	98.7	94.2	97.7	95.4	92.2	98.0
FRC	107		107.6	110.8	107.8	112.6	113.2	106.5	106.4	110.9	107.1	112.6	112.1	109.2	114.8
GOL	185		177.3	180.1	178.0	186.8	181.2	173.2	171.2	178.0	171.6	180.1	172.4	177.5	187.9
MAB	62		62.8	66.2	62.5	66.2	65.4	64.5	62.6	65.4	61.6	65.5	66.4	58.0	61.7
NLB	23		25.4	26.1	25.0	26.3	25.9	25.5	24.0	24.9	24.8	25.1	26.2	22.3	23.7
NLH	48	-	51.5	53.8	48.1	52.4	52.3	51.8	49.3	52.1	48.2	52.6	53.1	48.9	52.9
OBB	44	+	40.7	42.2	38.4	40.6	38.8	38.9	38.8	39.9	38.1	39.2	38.4	39.1	41.2
OBH	30	--	35.1	35.2	34.4	35.1	34.1	36.1	35.5	35.3	33.8	34.7	33.8	33.2	33.8
OCC	94		93.7	93.9	97.3	98.7	98.2	95.6	96.2	97.5	96.8	101.5	98.4	97.8	100.7
PAC	121	+	107.7	110.1	112.6	117.0	115.1	112.3	108.7	111.4	108.5	111.3	110.4	112.8	118.3
UFHT	63	-	70.8	73.4	66.7	73.0	72.1	71.5	67.6	73.7	65.8	71.2	71.5	67.6	73.9
WFB	97		93.0	97.1	93.2	96.0	92.5	92.9	92.2	94.0	90.0	94.3	94.7	93.4	96.9
XCB	135		137.0	143.0	132.7	135.4	139.2	136.4	135.4	138.2	136.3	141.3	140.5	135.3	140.3
ZYB	132		131.8	141.2	121.9	130.5	133.0	131.5	123.7	131.1	125.4	134.2	130.0	120.2	129.6

Natural Log of Determinant = 42.2726

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ML73-3413
S. Denick

FORDISC 3.1 Analysis of Current Case 4/26/2011 1:20:30 PM

DF results using 11 Forward % selected (min: 1 max: 20, out of 16) variables:
GOL ZYB BBH NLB BNL OCC BPL OBH WFB NLH
PAC

Variables removed: UFBR MDH MAL DKB EKB FOL FOB

From Group	Total Number	Into Group AM	BM	CHM	GTM	HM	JM	VM	WM	Percent Correct
AM	51	34	2	4	5	0	3	2	1	66.7 %
BM	96	2	64	2	6	9	4	2	7	66.7 %
CHM	69	1	8	35	4	3	10	5	3	50.7 %
GTM	68	4	1	0	52	8	0	2	1	76.5 %
HM	172	5	20	21	40	30	22	15	19	17.4 %
JM	168	22	8	24	6	19	71	14	4	42.3 %
VM	48	0	0	4	3	2	5	33	1	68.8 %
WM	263	1	17	9	1	12	11	8	204	77.6 %

Total Correct: 523 out of 935 (55.9 %) *** CROSSVALIDATED ***

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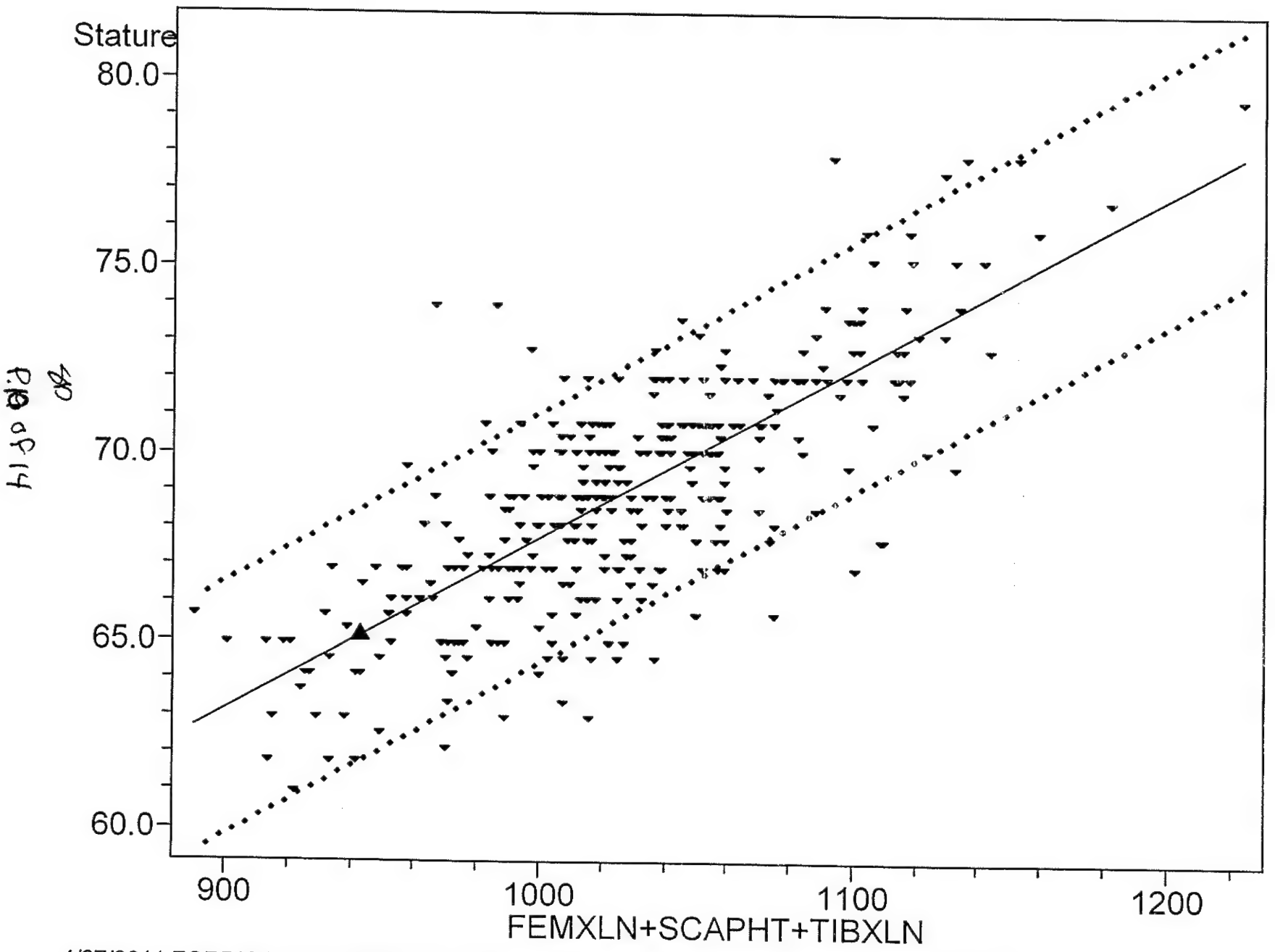
Multigroup Classification of Current Case

Group	Classified into	Distance from	Probabilities Posterior	Typ F	Typ Chi	Typ R
WM	**WM**	8.8	0.645	0.677	0.645	0.635 (96/264)
CHM		12.6	0.096	0.492	0.323	0.130 (60/70)
JM		12.8	0.086	0.376	0.308	0.262 (124/169)
HM		13.2	0.070	0.346	0.280	0.326 (116/173)
BM		13.4	0.062	0.385	0.265	0.385 (59/97)
AM		14.7	0.033	0.425	0.197	0.255 (38/52)
GTM		18.4	0.005	0.196	0.072	**0.044 (65/69)**
VM		19.5	0.003	0.229	0.053	**0.042 (46/49)**

Current Case is closest to WMs

Current Case		Chk	Group Means AM 51	BM 96	CHM 69	GTM 68	HM 172	JM 168	VM 48	WM 263
GOL	185		180.1	186.8	181.2	173.2	178.0	180.1	172.4	187.9
ZYB	132		141.2	130.5	133.0	131.5	131.2	134.2	130.0	129.6
BBH	137		133.4	137.3	139.7	133.2	136.5	138.8	137.8	141.9
NLB	23	-	26.1	26.3	25.9	25.5	24.9	25.1	26.2	23.7
BNL	103		103.0	104.4	100.3	98.5	100.7	101.5	97.6	106.3
OCC	94		93.9	98.6	98.2	95.6	97.7	101.5	98.4	100.8



4/27/2011 FORDISC 3.1 : Estimated Stature = 62.0 to 68.6 inches (90% prediction interval)

Harris County Institute of Forensic Sciences
Forensic Anthropology Division
Estimation of Race
(Gill and Rhine 1990, Base 1987, Burns 1999)

ESTIMATION OF RACE White/Asian-Native American Admixture . + = *NOTICABLE*, ++ = *PROMINENT*

CAUCASIAN	AFRICAN-AMERICAN	ASIAN/NATIVE AMERICAN
Skull Shape:		
____ High, Narrow	____Low w/Postbregmatic Depression	+ Low, Sloping
Skull Height:		
____ Rounded, Narrow	____Low and Flat	+ Rounded, High
Face Shape:		
____ Narrow, Long	____ Prognathic	+ Broad, Flat
Eye Orbits:		
____ Slanting Square, Large	____ Laterally Low and Small	+ Square
Zygomatics:		
++ Small- Retreating Malars	____Small, Retreating Malars	____ Robust and Flaring
Zygomaxillary Suture:		
____ Jagged, S-Shaped	____Curved or S-Shaped	+ Angled
Nasal Sill:		
+ Sharp, Protruding	____ Guttered	____ Sharp
Nasal Aperture:		
+ Narrow	____ Wide	____ Medium
Nasal Spine: Not present		
____ Large, Long	____ Little or None	____ Medium, Tilted
Nasal Bones:		
+ High, Arched	____ Low, Flat Wide Arch	____ Low "Tented" Arched
Alveolar Prognathism:		
+ Narrow, Little	____Pronounced	____ Reduced
Palatal Shape:		
____ Parabolic, Narrow	____ Hyperbolic	++ Elliptic
Palatal Suture:		
____ Z-Shaped	____ Arched	+ Straight
Chin: Not present		
____ Square, Projecting	____ Retreating	____ Blunt
Dentition:		
____ Crowded, Impacted M3	____ Crenulated Molars	+ Not Crowded
Bite: mandible absent		
____ Overbite	____ Overbite, Prognathic	____ Edge-to-Edge
Femur Curvature:		
+ Arched (L)	____ Flat	+ Little (R)

Case Number ML73-3413
Analyst S. Derrick
Date 3/14/2011

Harris County Institute of Forensic Sciences
Forensic Anthropology Division
Estimation of Sex
(Buikstra and Ubelaker 1994, Ubelaker 1989, Bass 1987)

Young individual

FEMALE — MALE

	-2	-1	0	+1	+2
CRANIAL					
Supra-Orbital Margin		-1			
Supra-Orbital Ridge		-1			
Mastoid Process			0		
Zygomatic Arch Extension					+2
Nuchal Crest			0		
Mental Eminence	Not present				
Mandibular Ramus	Not present				
Temporalis Attachment		-1			
POSTCRANIAL					
Sciatic Notch					+2

(Phenice 1969) Ventral Arc	☐ Presence	☒ Absence
Subpubic Concavity	☐ Concave	☒ Convex
Ischiopubic Concavity	☐ Presence	☒ Absence
Pubic Length	☐ Long	☒ Short
Sacral Attachment	☐ Elevated	☒ Flat
Sacrum Not present	☐ Straight	☐ Curved

(Stewart 1979)	Femoral Head Diameter	<42.5mm	43-46mm	>47.5mm
	Humeral Head Diameter	<42.7	43-46mm	>47.2mm

Case Number ML73-3413
Analyst S. Derrick
Date 3/14/2011

Harris County Institute of Forensic Sciences
Forensic Anthropology Division
Age Estimation

ESTIMATION OF AGE: 16-19 years

POSTCRANIAL:

Pubic Symphysis: * using LEFT

Right Probably Does not belong to (RIGHT) ML73-3413

FEMALE (Suchey-Brooks 1990, Suchey and Katz 1986)	_____	_____ 95% 15-23 yrs range
MALE (Suchey-Brooks 1990, Suchey and Katz 1986)	I-1	I-1 18.5 yrs $\bar{x}$ S.D=2.1
MALE (Todd 1920, 1921)	I:___ II:___ III:___	I:___ II:___ III:___
MALE (Suchey-Brooks 1990, Suchey and Katz 1986)	I:___ II:___ III:___	I:___ II:___ III:___
FEMALE (Suchey-Brooks 1990, Suchey and Katz 1986)	I:___ II:___ III:___	I:___ II:___ III:___

Symphyseal face (L) innom. is somewhat eroded. Slightly more developed than right innominate that does not belong to remains. clear absence of upper/lower delimitation. marked ridges/furrows present

Sternal Rib End Changes (Iscan et al 1984, 1985, 1986)

Rib#: 4 Phase: 0-1a Rib#: ___ Phase: ___

<17-19 yrs

(L) rib end smooth, minimally convex, no rim dev

Epiphyseal Closure (1 = No Union, 2 = Partial Union, 3 = Complete Union)
(Moore-Jansen et al 1994 page 8-9, Webb and Suchey 1985) metopic suture retained, ribs=heads not fused one in process 17-25yrs

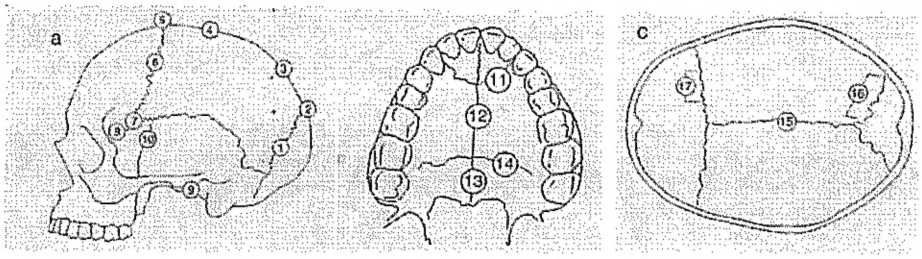
38) Basilar Suture 2	47) Lumbar Vert Rim 2	56) Proximal Radius 3
39) Medial Clavicle 0	48) Sacrum (S1/2) ___	57) distal Radius 2
40) Atlas – Anterior 3	49) Sacrum (S2/3) ___ N/A	58) Distal Ulna 2
41) Atlas – Posterior 2	50) Sacrum (S3/4) ___	59) ~~Distal~~ Ulna 3 Proximal
42) Axis – Anterior 3	(L) 51) Innom. Prim. Elem 3 ~~still fusing~~ in acetab SD	60) Femur Head 2
43) Axis – Posterior ~~3~~ SD	52) Ischial Tuberosity 2	61) G. Trochanter 3
44) Cervical Vert Rim 3	53) Anterior Illiac Crest 0	62) Distal Femur 2
45) Thoracic Vert Rim 2	54) Proximal Humerus 2	63) Proximal Tibia 2
46) L5 Body – Arch N/A	55) Medial Epic. Hum. 2	64) Distal Tibia 3

Illiac Crest (2)

CRANIAL: The decedent is too young for accuracy w/ this method.

Cranial Suture Closure (Baker 1984, Mann et al 1987, <eindl and Lovejoy 1985, Todd and Lyon 1924, 1925)
(0=open, 1=Minimal Closure, 2=Significant Closure, 3=Complete Obliteration/Buikstra and Ubelaker 1994 pages 32-34).

1)	0	10)	0
2)	1	11)	1
3)	1	12)	0
4)	0	13)	0
5)	0	14)	1
6)	0	15)	0
7)	1	16)	0
8)	1	17)	0
9)	1		



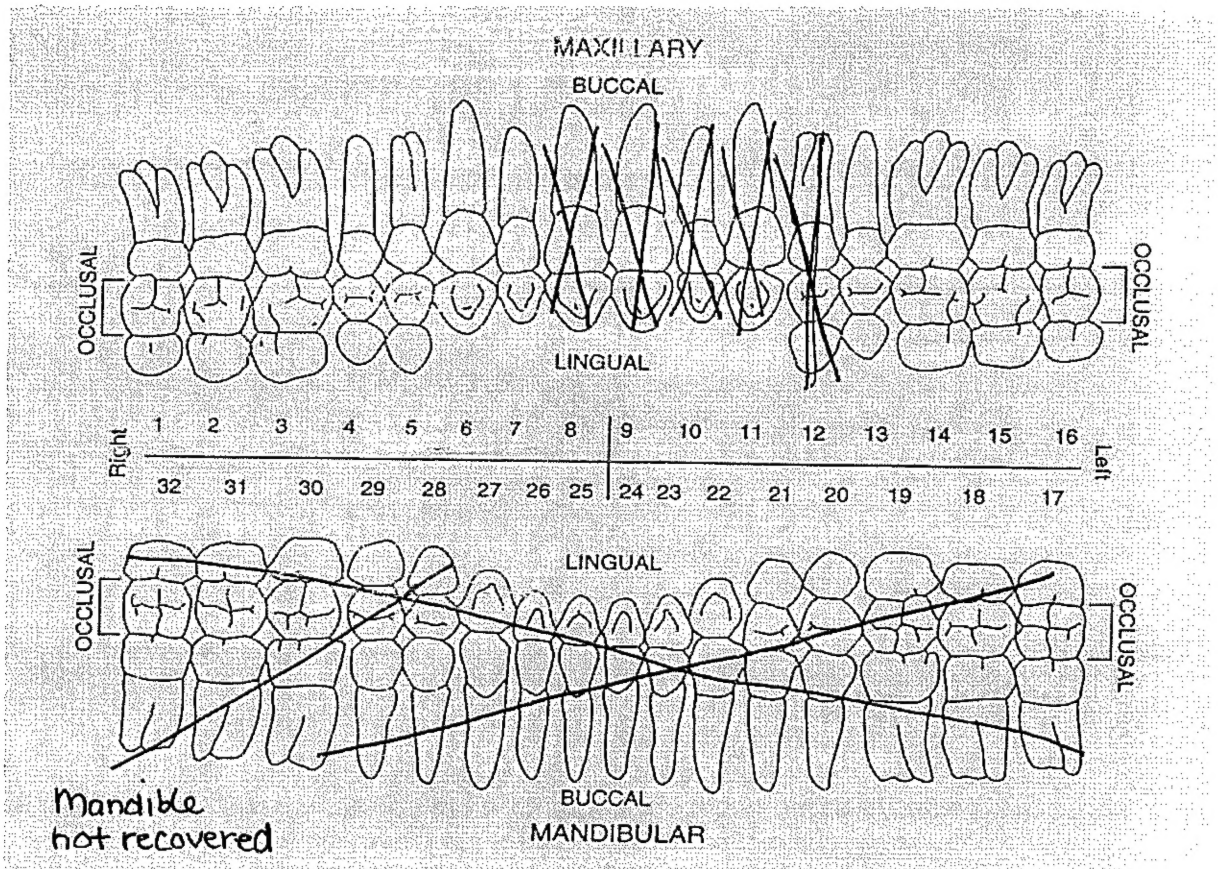
Vault Score (Sites 1-7) 3 Lateral Score (Sites 6-10) 3

Other Indicators of Age: Little to no wear on teeth. Third molar roots open, 3/4 developed. Rib heads fusing to neck (17-25 years), one only (16yrs)

Case Number ML73-3413
Analyst S. Dennick
Date 3/14/2011

05/21/10

Harris County Institute of Forensic Sciences
Forensic Anthropology Division
Dentition Chart - Permanent



*No caries noted, no reconstructions, cusp wear on 3, 14

	1. erupting, 3/4, open roots 16.4 yrs Smith, 1991	17.	
	2. pit in occlusal buccal groove	18.	
Carabelli's Cusp	3. pit in occlusal buccal groove	19.	
	4.	20.	
	5. pits in occlusal mesial + distal grooves	21.	
Smith 1991	6. root complete, 11+ yrs	22.	
86	7. shovel, root complete, 8.3+ yrs	23.	
	8.	24.	
	9.	25.	
	10.	26.	
	11.	27.	
	12.	28.	
	13.	29.	
	14. Carabelli's cusp, pitting in occ. grooves	30.	
pitting in grooves ←	15. apex 1/2 closed 13.9+ yrs Smith 1991	31.	
	16. erupting, 3/4, open roots 16.4 yrs	32.	

*Dr. Stimson noted occlusal caries on 2, 3, 14, 15 must be very subtle, in grooves? – Observed as pits

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